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CULTIVATION OF WHEAT IN TENNESSEE.

The Tennessee State Agricultural Bureau, at its session last winter, offered a premium of *one hundred dollars*, for the best ten acres of wheat *to be accompanied* with a statement of the mode of cultivation, &c.

The Secretary of the State Agricultural Bureau in his forthcoming report to the Legislature, remarks, "that up to the period of the establishment of the State Bureau, but little attention had been paid to the cultivation of wheat as a staple crop of the State. Flour was for many years one of the largest items of our imports from Cincinnati and St. Louis. The idea had become fixed in the minds of many even of our most intelligent agriculturists that our soil and climate were not well suited to the production of wheat—that it was not a *certain crop* in this latitude—that it was more profitable to raise corn, cotton and tobacco here, and buy wheat. With the greatest mass of our farmers, the wheat crop was no favorite. Its cultivation was careless, rude and imperfect, and as a consequence, the result was uncertain and very often unsatisfactory. The establishment of Agricultural societies in many of the counties of the State, and about the same time the completion of the East Tennessee and Georgia Railroad to Knoxville, and the Chattanooga Railroad, the societies, in stimulating by premiums, competition and comparison of modes of cultivation, and the roads in furnishing cheaper and speedier modes of transportation to the markets of the world—have already effected a wonderful change in the opinions and actions of the farmers of the State, and the wheat crop is now justly regarded as one of the most profitable of its staple products. The number of acres put in wheat has probably been increased three-fold within the last six years, and the product per acre has, in many sections, been more than doubled. In West Tennessee the crop is becoming a favorite one, to alternate with cotton, &c."

We copy the foregoing in order to show the beneficial results arising from premiums judiciously awarded. We have again and again alluded to certain errors, committed by the most of our Western Agricultural Societies in awarding their premiums. A premium awarded for the best carriage horse, the handsomest bed quilt or even the best bushel of corn or wheat and publicly announced from the judges' stand, amounts to but little by way of bringing about an improved system of farming. If John Smith shows the fairest sample of wheat, or John Brown the best crop of tobacco, or Timothy Jenkins the best dressed lot of hemp, the bare announcement of the fact adds nothing to the common stock of knowledge *how* these results have been brought about. In the first place, in order to induce the farmer to exercise his skill and judgment on the subject of how he shall prepare his land and plant his crop, or how he shall best prepare another for market, in order to secure the greatest yield, liberal premiums should be offered for all the staple crops. And in order that the world may be made the wiser for the

various experiments that have been made, and the mode by which a superior crop has been grown or tested, a part of the consideration should be that the contending parties be required to furnish written statements in full, how the end was secured. And then, to make the system complete, the Secretary of each Society should be required to prepare these various statements in connection with his annual report for publication. And if the people of any State deem themselves *too poor to sustain a first class agricultural paper, one that shall be worth to them ten times the cost of subscription*, in wh ch these reports shall be published, then let the local press of the town publish them, for the benefit of the farming community at large. If this course were generally carried out, farmers would soon learn the value of agricultural societies as well as agricultural papers.

Under this system so recently adopted by the Tennessee Agricultural Bureau, according to the report before us, we learn that in 1850 the wheat crop of that State amounted in round numbers, to 1,600,000 bushels, while the crop of the present year, from the most careful estimate is set down at from 5,000,000, to 8,000,000 bushels.

For crops of less than ten acres, which area was required in order to compete for the premium, the Secretary states that in several instances the yield per acre exceeded considerably that to which the premium was awarded, and in some instances the product amounted to fifty bushels per acre.

For the benefit of our readers in general, and our tobacco growing friends in particular, we copy the statement of the several competitors for premiums, showing the mode adopted in cultivation.

I. W. H. Drane, of Montgomery county.—His crop, on forty and three-fourth acres, yielded eleven hundred and ninety-two bushels, or an average of twenty-nine and a quarter bushels per acre. It is the opinion of many of Dr. Drane's neighbors that if a field of ten acres of the best of it had been laid off and measured by itself, it would have yielded at least forty bushels per acre. Dr. Drane describes his mode of cultivation:

"During the month of February 1856, the turf was turned, and each large plow, followed by a No. 1 subsoil plow, (two horse)—after exposure to frost, a four horse harrow was passed over; and again in March, another plowing and subsoiling, crossing the first—and the harrow as before, forming a fine tilth of about ten inches. This was in the Winter and spring of 1856, and although it was preparatory for a crop of tobacco, still I regard it also as a preparation for the wheat crop, that was established as soon as the tobacco crop was harvested.

PREPARATION FOR TOBACCO PLANTING.

Five tons of genuine No. 1 Peruvian Guano was mixed with one ton of ground land plaster (gypsum, or sulphate of lime.) The guano was pulverized in a large trough with wooden pestles and the gypsum added, so as to make the compound pass more readily through a fine sieve. The great object in adding the sulphate of lime was to change the carbonate of ammonia (the most valuable constituent in guano) from a volatile to a fixed form. The sulphuric acid in the lime combining chemically with the ammonia, gives the sulphate of ammonia, a fixed salt that does not fly away as the carbonate, to return only in *infinitesimal dose* with the snows and rains, and that fall over the wide country; but remains and is yielded up to the plants as needed—of course the carbonate acid, in the ammonia, forms with the lime, in the gypsum, carbonate of lime, (the common form.)

"There was about one ounce of the compound of guano and gypsum placed beneath each tobacco hill, except that portion of the field marked 10 acres, which was sown broadcast at the rate of 250 pounds per acre and immediately thrown into beds, and prepared for hilling.

"After the tobacco was harvested the stubble was thrown out of the ground with a two-horse plow, and when dry had a bush passed over, so as to remove the dirt and make the roots light and easy to handle. The land was turned with a large plow, and the tobacco roots placed in the furrows, so as to bury them and keep them from embarrassing the operation of the Wheat Drill—after plowing, a bush was turned across so as to level and give an even surface for seeding (a harrow would have disturbed the roots.)

"The drill is from A. Pretz & Co., Dayton, Ohio, and the present will be the third season in use, and it operates in a manner entirely satisfactory; being so arranged as to vary the amount of seed per acre, with extra slide for oats, and addition for timothy and red clover seed. The grass seed may be sown at the same time with the drilling of the wheat or oats.

"Two bushels of seed wheat were used per acre, with no preparation except careful cleaning. A great advantage in drilling is the even and unvarying distribution of seed—the regularity of planting as to depth, and the small depression left, which, under the action of frost and rains, is constantly tending to a level, thereby feeding the plants and preventing, to a great extent, the frequent disaster of winter killing. The drill is worked by two mules, and the depth of planting (about 3 inches) can be varied at pleasure, as well as the quantity of seed per acre.

"I beg to state that it was my intention to have had the best part of the field (the ten acres) gathered, threshed and measured separately, for the purpose of competing for the premium—but being suddenly called from home, to a member of my family sick at the City Hotel, Nashville, and forgetting to leave any instructions, it was, when I returned, too

late; all that I claim is the general average of the whole field ; at the same time I would state, that during the summer of 1851 I visited some of the best agricultural districts in England, and I saw no wheat that stood better or thicker on the ground than the above 10 acres, which was treated with the guano broad-cast, and which lay dormant, in a great measure, during the tobacco culture, from the extreme dryness of the season, and yielded its powerful influence as a fertilizer to the following wheat crop.

"I will only add, that I consider the frequent plowing and hoeing during the cultivation of tobacco as the best preparation known in our section for a succeeding wheat crop. All of which is respectfully submitted.

W. H. Drane."

II. James Webster, of Maury county.—Col. Webster's yield on ten acres, was three hundred and thirty-three bushels and a half—an average of thirty-three bushels per acre. He sowed one bushel per acre, and plowed it in with the No. 6 Miller plow, turning over the entire coat of deposite from the stalks and leaves of cotton, which had been the preceding crop. No manure was used. The land was brushed after sowing. The seed was the smooth head red wheat, known as the Biffle wheat. The land had been twenty-seven years in cultivation.

III. Jas. B. Buchanan, of Rutherford county.—Mr Jas. B. Buchanan raised six hundred and eighty bushels on 18 acres and 23 poles—an average of about thirty-eight bushels per acre. Mr. Buchanan thus describes his mode of cultivation :

"The land on which the above wheat grew, is in the edge of Rutherford county, on Hurricane Creek, and on the Nashville, Murfreesbero and Shelbyville turnpike road. Said field has been in cultivation about fifty years, and the greatest portion of that time in corn. Three years ago last spring, I sowed the field in oats and clover. Last fall I sowed it in wheat. The kind I sowed was the purple strawed white. Before sowing I dug up all the stumps. I then broke the ground as deep as I could with two-horse plows. sowed the wheat and harrowed it in with large two-horse harrows. I commenced sowing on the 8th of September, 1856.

Respectfully, &c.,

Jas. B. Buchanan."

IV. R. H. & M. M. Armstrong, of Knox county.—These gentlemen were awarded the premium, the yield being thirty-eight bushels and twenty-four pounds per acre. They thus describe their mode of cultivation:

"During the latter part of August, 1856, the field (20 acres) was broken up, having produced excellent crops of clover for the previous three years. The field was rolling upland—not an acre of it level. From the 25th of Sept. to the 1st of October following, the wheat (white blue stem) was sown broadcast, by the hand, about two bushels to the acre. When sown it was harrowed in perfectly with a heavy harrow. In due time the ground was covered with a solid verdure. About twenty-five head of calves were pastured on it during the winter and until the middle of Macrh, 1857. The severity of the winter of 1856–7, was probably never surpassed in East Tennessee. As spring advanced the crop of wheat grew very rapidly, and headed out in the most beautiful style. About the 6th of July it was harvested with the cradle. After being cut and shocked, within less than one month it was threshed and sent to market in New York. It was the first lot shipped from Knoxville, and undoubtedly one of those lots which gave such a reputation for superiority to East Tennessee Wheat in New York, this season. Cleaned by Doyle's Improved Fan, it was free from cockle, cheat or white caps, and altogether presented as fair a specimen of wheat as was perhaps ever produced in the country. It compared very favorably with the samples of Tuscany White Wheat, distributed by the Patent Office, the grain being quite as large and almost as white.

"The above field of wheat was cultivated without the use of lime, guano, manure or any other assistant, further than above stated. The crop was put in under the system and in the style usually adopted and pursued by the late Col. Drury P. Armstrong during his life—the field being a part of his home place (Crescent Bend) in Knox county, two miles west of Knoxville.

"Ten acres of the above field of 20 acres were laid off, in almost a square body by the county surveyor, of Knox county, and the product of the same was measured separate and apart from the remaining portion with the view of contending for the premium offered by the State Fair of Tennessee, in Oct. 1857, at Nashville, Tennessee.

"For the yield on the above ten acres, see the certificates accompanying.

Respectfully submitted,

R. H. Armstrong,

M. M. Armstrong.

Knoxville, Knox co., Oct.' 1857.

Wheat Midge---Proposed Importation of its Parasitic Destroyer.

We believe it is not generally known precisely when, nor by what means this great enemy to the wheat crop in this country, found its way to our shores. Like the Hessian fly the midge is, undoubtedly, of foreign origin. We have known it for about twenty-three years. Its depredations at that early period were confined to a very limited portion of the Eastern States. It has since, with the march of civilization and improvement, gradually advanced Westward, until its depredations in Ohio, Indiana and other western States have become a matter of serious alarm. It is not unlikely that, like that other great pest of the farm—the Canada Thistle, it may have found i s way among us across the lakes, from the neighboring shores of Canada.

The Bureau of Agriculture of Canada West

have just published an essay on the "Ravages of the Wheat Midge." It is written by Mr. Hind, and is said to be a most valuable document. The Secretary of the Bureau of Agriculture, in writing to Col. B. P. Johnson, Secretary of the New York State Agricultural Society, says:

"The reports of our loss in Canada, are daily adding to the estimate of destruction. It is not too much to say, that Canada looses by the Midge, alone, one-third of her whole crop of 1857, which would have been 26,000,000 of bushels. At all events, we are minus 8,000,000 bushels—a serious loss to a colony of only two millions and a half of people."

Some years ago, Dr. Asa Fitch, Entomologist of the New York State Agricultural Society, prepared an essay, which appeared in the transactions of that society. In this essay Dr. Fitch pronounced the insect identical with the *cecidomya tritica* of Europe. When this publication reached Europe, a distinguished French Entomologist, C. B. Amyot, at a meeting of the Entomological Society of France, called attention to the subject, and dissented entirely from the conclusion of Dr. Fitch, that the insect of the two countries were one and the same species. But upon a more recent microscopical examination and comparison, the society fully sustained Dr. Fitch in his conclusions. This led to the discussion of the question why the insect is so much more destructive year after year in this country than in Europe—why it does not multiply there and destroy wheat crops the same as it does here? A very rational conclusion appears to have been arrived at. It is well known to those at all conversant with such matters, that nearly all insects, injurious to vegetation have their parasitic enemies, but for this it would be almost impossible to protect any crop from their destructive ravages. From all foreign accounts, it appears that whenever the midge becomes so numerous as to be perceptibly injurious, instead of continuing its ravages, it suddenly and totally disappears, and in place of it the fields next year swarm with little parasitic bees which have destroyed it. But with the introduction of the midge into this country the bee has not found its way, and hence the wide spread ruin that marks its course. It is now proposed to import the destroyer from Europe. In speaking on the subject, Dr. Fitch says: "This being a matter of such vast moment, involving a saving of millions of dollars to this country, every year, as I was corresponding with Mr. Custis, President of the London Entomological society, I addressed him a letter upon this subject. This letter he laid before the Society and it formed a prominent topic of discussion at one of their late meetings, the members being astonished to learn the ravages which this insect was committing in this country, and they mutually agreed that if the midge presented itself to the notice of any one of them, so that they could obtain living specimens of its parasite to forward to me, they would do so. In its larvæ state, these parasites might readily be sent to this country in a pot of moist earth, but as they can only be obtained in the season when the midge is abroad in considerable numbers, it may be several years before we can get it."

The Canada Thistle---Look Out.

It appears that nothing short of constant watchfulness and eternal vigilance will protect our beautiful prairies from the inroads of this greatest of all vegetable pests. A writer in the Ottowa, (Ill.) Free Trader, states that he has just received a quantity of fruit trees from a western New York nursery, the name of which we withhold, and that the bundles were enveloped in rye straw, abounding in the seed heads of the Canada thistle, upon which he remarks: "Those who know as I do the character of the plant, will judge the emotions occasioned by an acquisition wholly unexpected and compared with which, war, pestilence and famine would be regarded as merciful inflictions upon our agriculture."

The editor adds that some eight or ten more bundles of the trees here spoken of are still in the Court House yard and we understand the Mayor has forbid their removal.

With all the precaution that has been taken this plant is rapidly spreading over the country. We saw it growing in immense quantities the past season in some parts of Ohio. If its appearance and character were fully known by the farmers in general, any chance plants that appear in a neighborhood would be readily exterminated, but we presume there is not one person in a thousand in the west who would know the plant when they saw it. In order that our readers might form some idea of its appearance we gave in the June number of the *Valley Farmer* for 1857 an engraving and description of it and cautioned our readers against its introduction in certain grass seeds obtained in Western New York, and sold in this market under a false name. But the greatest danger of its introduction is with the packing of trees

from the nurseries in that portion of New York where it abounds, and where the grass and grain crops in many instances, when harvested, contain almost as much of the thistle as of the grass or grain itself, and it seems beyond the power of man to rid the soil from it.

Messrs. Ellwanger & Barry, the most extensive nurserymen of Rochester, and others, have wisely adopted the plan of packing trees for transporting to a distance, in boxes instead of straw, and if other nurserymen in the same vicinity expect a continuance of Western custom they must pack their trees in something besides straw, which it is impossible to obtain there free from the Canada Thistle.

The Exercise of Mind on the Farm.

It has formerly been thought that if a young man displayed more than ordinary powers of mind, he must be educated for and inducted into one of the learned professions—either law, theology or medicine. It was supposed, that in the profession of Agriculture. there would be no field for the exercise or display of more than ordinary ability. Granted, for the sake of the argument, that such has been strictly true in the past. It is not the case in the future. Why? Because the exercise of mind can now be substituted for that of muscle. Heretofore farming has been carried on almost entirely by muscular power. Mental power is now taking its place, and he who possesses the greater mental power and brings it into practical application in his farming operations, will be most successful. If wealth is his object he will reap the richest harvests, in the same manner that the best banker, the best lawyer, the best merchant the best physician, the best mechanic, will.

But what has produced this change? The improvements in agricultural implements and machinery. It may be safely said, that within the past fifteen years, the labor of the farmer has been reduced at least, three-fourths by the aid of improved implements and machines. The farmer, who formerly was compelled to cultivate but a small farm, and to labor assiduously the year round, has been suddenly promoted to a commander, as it were, if he have the capacity to fill that station. But as all men have not the capacity to act as generals, even if elevated to such an office, so, neither, have all farmers the capacity to take the advantage of the new order of things. Some men are not capable of managing a large business, but those who are, can find as fine a field for the exercise of their ability, on the farm, as elsewhere. It is not necessary, if they have not the disposition, for them to labor, physically, any more than it is for the commander of the ship. But they should understand, like him, their business, and be able to give the words of command, and direct all things understandingly. Everything will then move on harmoniously.

It is not necessary that farmers should be confined constantly to the labors of the field.—They have a great profession to understand, and like other professional men, must devote some time, daily, to the study of their profession, and inform themselves of all the new discoveries and principle improvements in their pursuit. As in other professions, those who study most, and are most persevering in mastering their profession, and informing themselves of all the new discoveries and principles and improvements therein rise the highest and are most successful, so the farmer who studies his profession most thoroughly, who stores his library with the best agricultural books and his table with the best agricultural journals, and reads them to be instructed and better informed in his pursuit—not blindly taking all that is said, but putting all in the crucible of his judgment, to be used or rejected as prudence may dictate, so, we say, will he become the most successful, the most respected farmer—and the farmer, too, whom the people should delight to honor. Such a farmer would be qualified to discharge all the duties of an American citizen. In the Legislature of his State or in the Congress of the United States, as Governor or President he would be qualified to do credit to himself, to his brother farmers, and to his glorious country.

AGRICULTURAL EDUCATION.

Standing as we do in the centre of this great agricultural West, we cannot keep silent on the great subject of agricultural education. While our farmers are rearing more children than any other class of the community—more perhaps than all others put together—children of as strong minds and stronger bodies than any others; while theirs is thereby the most dignified and natural profession of any that men follow, ordained and sanctioned by heaven; while it is conceded that every great temporal interest of society rests on agriculture as its basis; that cities and towns, trades and professions are sustained by the farms and farmers of the country; and while the hope and

glory of our country flower only in the gardens and farms of the honest tillers of the soil, we see no reason why the great educational interests of the whole country should not be closely identified with, and largely sustained by, agriculturists. Lawyers have their law schools; Divines have their divinity colleges; men of science have their scientific institutes; teachers have their normal schools; churches have their high schools and universities, the people have their free schools for primary instruction; but where are the farmers' schools? Where is his profession honored by the hands of learning? Where is his *alma mater*? Where shall he send his sons to cultivate their minds, invigorate their bodies, and, at the same time, inspire in them a love and respect for the profession of their fathers? True, the attention of legislators and clear-sighted men all over the country, has for some years been turned to this subject, but railroads, banks, new territories, gold regions and party claims, have called so loudly, that but little has been done for agricultural education. A few grants have been made in some States; a few earnest men have raised individual subscriptions. In several States, as New York, Pennsylvania, Virginia, Maryland and South Carolina, colleges are already in process of erection, to be finished when individuals and the Legislatures shall grant money enough. As yet, so far as we know, there is but one agricultural college in actual operation in our whole country. That is at Lansing, in Michigan. It has been in operation nearly a year, with entire success. It numbers about one hundred students; has resources to the amount of nearly one hundred thousand dollars; a farm of 676 acres. All honor to Michigan. It is hoped that two or three new colleges will go into operation next year. But what are two or three compared with the widespread farming interests of this country? compared with the hundreds of thousands of youths to be educated? Every State needs its agricultural college, amply endowed, amply manned. And even more will be wanted, as soon as so many can be established. It needs not a prophet's eye to see that the future of America is to be grandly agricultural. Our soil contains the prophecy of our country's course and glory. The world is to be tributary to us, and our agriculture is to make it so. It is time, therefore, that our people saw the line of their interest. It is time our legislators were aroused from their scrambles for office, spoils and power, by the million-voiced cry of the farmers, for a land grant in behalf of their educational interests. Let the farmers petition Congress for such a grant. Let it be done now, that this present term shall not pass without such a grant. A bill to this effect is already before Congress. Let it be passed, or some equivalent bill, by the united voice of Congress and the country. We speak for the farmers of the West; we ask it; we demand it. We know all our Congressmen want is to have their attention called to the subject. With a grant such as Congress is competent to give, we could soon have a good agricultural college in every State in the Union. We ask not for our State alone, but for all States. All are ours. Our country is one. Give us the grant, and the colleges shall soon rise to usefulness and distinction.

Terra Culture.---Hog Cholera---Its Cause and Prevention Discovered.---$25,000 asked for the Disclosures.

Some eight or ten years ago Russell Comstock, of Dutchess county, N. Y., professed to have discovered some new law of vegetable physiology, an observance of which, in cultivation would be worth millions of dollars to the country. He subsequently, we believe, petitioned congress to grant him a large sum of money for the public disclosures of his pretended discovery. Failing to obtain the attention of Congress, he next petitioned the Legislature of New York for an appropriation of the modest sum of $500,000 for "disclosing the discoveries." Being no more successful in this effort than in his petition to Congress, he next calls the attention of the New York State Agricultural Society to his wonderful discovery and at their annual meeting in January, 1851, a committee was appointed, consisting of Messrs Nott, A. J. Downing, Van Bergin, Lewis F. Allen and E. P. Prentice. The committee, after conferring with Mr. Comstock, state "that they are of the unanimous opinion that no new discovery has been made by Mr. Comstock, nor was his practice different from that of experienced nurserymen heretofore, and which may be found described in public works—and although important in themselves, they do not deem it proper for the society to recommend to the Legislature any appropriation to Mr. Comstock as the discoverer."

Failing to obtain any appropriation for a public "disclosure," the self-styled "Professor," took up lecturing on the subject, exacting a

pledge from his hearers, when he could obtain any, that they would never divulge the secret. In a course of lectures of several tedious hours in "disclosing his discoveries," his hearers learned just what nature has always taught and just what every observing, intelligent cultivator will always practice, what we have practiced and endeavored to enforce for years, which may be summed up in a few words, viz: That there is a point in every tree and plant just at the junction of the root and trunk, or stalk, which he terms the *seat of life*, hence in transplanting a tree, and putting this point too far below the surface, you do violence to nature, resulting in injury or death. The same principle is involved when throwing a furrow of two or three inches in thickness over the roots of corn, potatoes and other crops, when nature has established the proper points between the earth and air. This constitutes Comstock's great discovery of "Terra Culture." Mr. Comstock has continued to lecture, always most successful among the most *unenlightened*, seldom succeeding in obtaining an audience, at one dollar each, in an intelligent community.

He has, for some time, been lecturing in certain counties in Ohio, and recently one of his followers in Terra Culture has made known another wonderful discovery, viz:

THE CAUSE AND PREVENTION OF HOG CHOLERA.—This discovery was made in Higginsport, Ohio, in March last, all of which it is proposed to be made known to the world for the sum of $25,000. A considerable amount of this has been subscribed, but whether the sum required will be raised remains to be seen. At any rate Professor Comstock should be classed as one of the *benefactors* of mankind.

Since writing the foregoing Mr. Comstock has called on us under the impression that we had said or published, that if he would visit Louisville, we would insure him a class of three or four hundred hearers, at $1.00 each. This was quite new to us as we have known the nature of his pretended discoveries for years and would never sacrifice the time that he occupies in making his disclosures to hear him. He however discovered his error and finally ascertained that it was the Editor of the Farm Journal who had promised him success if he would visit our State.

Agriculture is the basis of all other interests. It has created and sustained our cities, chequered our land over with railroads, given vitality to our manufactures, and made this country the most glorious in the world.

(Written for the Valley Farmer.)

Educational Agriculture.---No. 3.

BY HOPE VERRET.

I promised to search among the theories of the great thinkers of the past, to see if even in what is usually considered the rubbish of past opinions, I could not find some valuable rules for present observance.

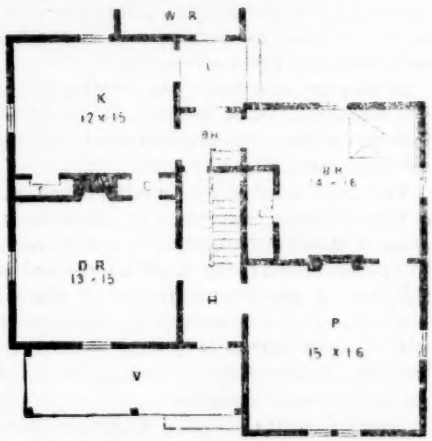
Those who call themselves practical men are accustomed to speak scornfully of the generalizations of Metaphysicians; yet all must acknowledge that the old philosophers, and with their help, the new ones also—have developed many grand and far-reaching truths. My inquiry shall be concerning the practical, every day value of these, and especially, whether they can be beneficially applied in the development of mind, in the work of Education. We can trace back to ancient philosophical speculations all those sciences to which the world owes its activity and advancement, often discovering their germs in what seem to us dead theories. In such we find the origin of Mathematics, Mechanics, Astronomy, Chemistry and Agriculture. In all of these, *theoretical* knowledge has produced *practical* power, and in the last we have already observed how a knowledge of the elements of matter gives power over the results of their combinations, and I have endeavored to prove by analogy the benefit that might be derived from a corresponding power over the elements of mind. Evidently, power is to be attained in no other way than by corresponding knowledge. And how is this knowledge to be acquired?—Can it be by the brief experience of one man under one set of circumstances? Practising upon rules derived from such incomplete knowledge in other sciences, is called *quackery*. Shall we hope to derive rules of universal application from such data while we throw aside as worthless, deductions drawn from the sum of the experiences of mankind for five thousand years? Should we not rather, even at the risk of having to penetrate much rubbish, be willing to search diligently through all the storehouses of knowledge within our reach, for principles of the constitution and action of the mind?

Having carefully tested what seem to us to be truths, by facts within our own experience or knowledge, we may hope to be able to assist in deducing from the philosophy of the mind an art for its developement. That there is at present more than a *name* for such an art, I deny, but as confidently believe there will yet be one, and may hereafter venture upon suggesting some of the principles upon which I think it will be founded.

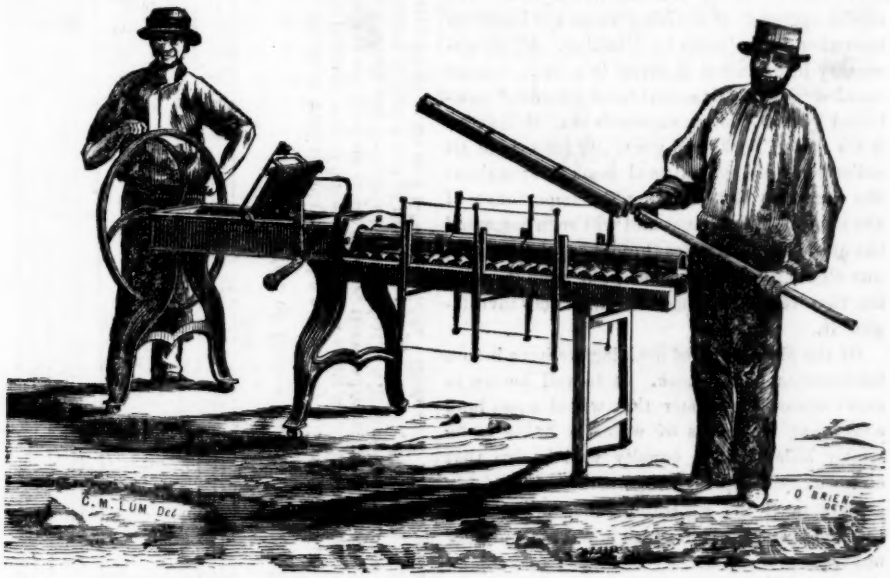
A FARM COTTAGE.

Architecture is sadly neglected by a large majority of our rural population. It is only occasionally that we find a dwelling and outbuildings of taste, as we are passing through the country. The reason is because no suitable plans are presented to the farmers, and not because they do not admire a residence of elegance. The builders and architects of the country are more at fault than the farmers. But the farmers should employ those only who are competent to do a job which shall reflect credit upon the taste of the owner. Every one in building, of course, should adapt the cost of his building to his means. But if a house be cheap, it may at the same time be elegant. Farmers should do more to render home attractive. One reason why so many of the sons of farmers are wishing to leave the farm, and go to the city, or embark in other pursuits, is because home presents so few attractions. And one of the first things to be done towards rendering it attractive, is to erect a beautiful house. With the hope of bringing about some improvement in our rural architecture, we have heretofore, and shall hereafter, present some models or designs which we consider worthy of adoption. The above design is from a work lately published by D. Appleton & Co., of New York, entitled "Village and Farm Cottages." The explanation is as follows:

The stairs, starting just back of the parlor-door, on the right side of the hall, land on a platform, six feet above the floor, from which they return over the bedroom closet. At the rear of the landing, a partition crosses the hall, with a door at the side of the staircase. The cellar flight, starting in the back hall, goes down under the main stairs, that part of it beyond the platform being incased. The back porch is open, and the wood-room is beyond it, with kitchen-pantry, and other conveniences.



In the second story, the stairs land over the partition between the parlor and bedroom. There are two pantries between the chambers at the right of the hall—one for each. There is a small one also in the back chamber beyond the stairs. There is a large closet in the hall for bedding, etc., and a small one in the left-hand chamber. If needful, this room may be divided in the center, and a portion of the hall closet devoted to the front half. The chimneys are of brick, and topped out with the same. The small dormer windows in the roof are intended for ventilation as much as for light. But they are decorative features also. The window caps are of plank, supported on simple brackets. The front gable window has a flower balcony. The verandah is solid and plain, and is so finished as to show its construction. Sawn brackets of solid plank adorn the gable cornices, while the extended rafters are made to show along the eaves.



LAND DRAINING.

In older countries, where agricultural progress has reached a much higher point than with us, it has been said, and truly too, that "draining is the basis of all agricultural improvement." But it may be asked whether in a country like ours, where land can be bought so cheap, it is worth while to consider the subject of draining. We will answer, that where land is worth $50 and upwards per acre, if it contains an excess of water it will pay to drain it. Tile draining in this country is comparatively a new business, and there are but few farmers who know the extent of its benefits. The idea of land draining is generally associated with bog or marsh land; but land that is usually drained with tile is upland, and would by many, be called dry land, or such as would, without experience, be considered not in need of draining. All land with a sub-soil, into which if a hole is dug, as for setting fence, where the water is found to stand at any time in the spring of the year, requires draining. Upon such lands, all winter grain is liable to be more or less injured by frost during winter, whereas, wheat upon the same land, when drained, generally escapes winter killing, and upon an average of years will double the quantity per acre.

Mr. John Johnston, of Geneva, New York, was the first to introduce this system of tile draining in this country. Mr. Johnston came from Scotland about thirty years ago, and being poor, was content to buy land then considered inferior to much in that section of New York. This land was stiff clay, with a tolerable soil, but which was found to retain so much water that his neighbors thought him very unwise to invest his money in it, but being familar with the business of draining in his own country, Mr. Johnston saw at once that this land only required draining to make it equal to the best wheat land in the State. By chance a tile machine was sent from England to this country, which finally fell into the hands of Mr. Johnston. With this he moulded his tile and commenced the business of draining. He continued every year to drain field after field with such success that often the increased yield the first and second years after the operation, more than paid all the cost of draining. By this process he increased his farm by purchase from time to time until it now numbers upwards of 300 acres, all of which has been drained, requiring over 60 miles of continuous tile. No land in the State now yields more and better wheat or larger crops of corn. Mr. Swann, son-in-law of Mr. Johnston, owns an adjoining farm of about equal extent, upon which a still greater number of tiles have been laid with no less success. The result of these experiments has led to the establishment of several drain tile works in the immediate neighborhood of Geneva, and similar establishments have gone into operation in different parts of New York, Ohio, Indiana, Michigan and other States. The machinery is cheap and the process simple and can

be carried on at any ordinary brick yard. The *modus operandi* of draining we do not intend to incumber our columns by detailing. All the necessary information is given in a little volume entitled "Munn's Practical Land Drainer," published by A.O. Moore, successor to C. M. Saxton & Co., New York, and generally for sale in all collections of agricultural books throughout the country. But knowing the importance of the subject, which must and will soon command the attention of farmers throughout the country, our object is to throw some light upon it, with the view to induce them to think and investigate it.

Of the philosophy of draining we have before taken occasion to speak. It is well known to every observing farmer that wheat upon land containing an excess of water is liable to be winter killed. It is equally well known that corn and other spring crops make only a sickly growth until the superabundance of water in the land has passed off, which in wet seasons does not take place generally until the opening of the month of June and often later. No upland plants can grow with their roots in the water. Earth that is saturated with water cannot maintain a healthy, growing temperature for any crop. The excess of water must pass off by filtration and evaporation, and on land that most needs draining this excess chiefly passes off by evaporation, and this process so reduces the temperature of the soil that corn and other crops will make no progress until the heat of the summer's sun has accomplished this work, when the ground has become so hard and compact that an extra amount of labor is required to put it again in growing condition, and the season is so far advanced that the crop is almost always cut short by drought or frost.

In every instance where judicious land draining has been practiced in this country the crops have been more than doubled and the value of the land increased in a corresponding degree.

Before land draining can be introduced, tile works must be established. In every place where this has been done, the business has proved profitable. With the view to encourage the establishment of these works in sections where land needs draining, we give a cut illustrating Daine's Tile Machine, and also the plan for a drying shed and clay mill, with description of the process of manufacturing, cost, &c. For the illustrations we are indebted to Robert F. Johnston, Esq., editor of the Michigan Farmer, in which they were published in the June number for that year.

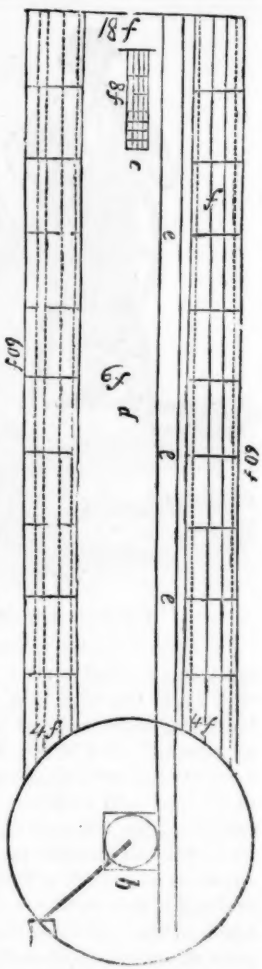


Fig. 2. Plan of Drying Shed, and Clay Mill for Making Tile.

a, Stack of unmixed clay; *b*, the pug or clay mill, with a sweep ten feet long; *c*, the tile machine; *d*, the passage way of 6 feet in the shed, along which the machine is moved on its own wheels, as fast as the shelves are filled on either side; *e*, the wooden railway, 3 feet wide, which brings the clay to the machine, and which may be carried out so that it will take the dried tile to the door of the kiln, which may be located at either end of the sheds; *f*, *f*, the shelves on both sides of the shed, 60 feet long, with supports 9 feet apart and 4 feet in width. Each shelf 12 inches above the one below.

Where two or three farmers wish to avail themselves of the benefit of draining, the cost of establishing the works will be but trifling; or if taken hold of by an individual the demand for drain tile will soon follow, for where these works have once been established their numbers have generally multiplied. The work can be established and carried on in any common brick yard, or upon any part of the farm where clay of suitable quality can be obtained.

Daines' American Drain Tile Maker, is manufactured by John Daines, Birmingham, Michigan. We saw this machine in operation at the fair of the U. S. Agricultural Society at Louisville, Ky. We also noticed one in operation at the Ohio State fair at Cincinnati, manufactured by F. M. Mattice, Buffalo, N. Y., both of which are good machines.

The following description and illustration will enable any one to establish the work:

1st. *The Clay.*—Any clay, of good smooth quality, such as will make a good quality of brick or pottery, will answer for drain tile.

2d. *Grinding the Clay.*—Any of the means ordinarily employed in grinding clay will answer for this purpose. The *Pug Mill* is, perhaps, as cheap and convenient as any. One of moderate size will grind at one time sufficient clay to make about ten rods of four inch tile, or fifteen rods of three inch tile.

3d. *The Machine.*—The tile machine is simple in its construction and not liable to get out of repair. The clay is forced through the dies for forming the tile, by a screw, operated by hand, with the aid of a handle attached to a small balance wheel. The machine is but about eight feet long and may be easily worked in a space of eight by ten feet.

Fig. 3. *Section showing the elevation of shed and shelves, on a scale of* 15 *feet to the inch.*

4th. *The Drying Shed.*—This structure may be of the cheapest and most simple kind and of any length necessary for the extent of the business contemplated. It is filled with rough shelves, three feet in width, upon which the tiles are laid to dry.

5th. *The Kiln.*—In a regular drain tile establishment a kiln is usually constructed for burning the tile. A convenient size for moderate operations is ten feet in length by six feet in width, and six or eight feet high. This will admit of the construction of two arches to run lengthwise of the kiln, and permit the use of the common sized cordwood. A kiln of this size will burn about two hundred and fifty rods of three and four inch tile at a time, sufficient for three quarters of a mile of drain. For permanent use it should be made of brick and arched over. It may be increased to any size required for more extensive operations. For temporary purposes the tile may be burnt in the top of a brick kiln.

6th. *Cost of the Fixtures.*—We give the cost of the fixtures necessary for a tilery such as would supply the wants of three or four farmers who might combine to set up one for their own use:

The Machine - - - - - -	$110 00
The pug mill for grinding clay - -	6 00
Laying down a wooden track for a car to carry the clay from mill to machine	4 00
Cost of a car with platform - - -	5 00
Range of shelves 6 feet high and one foot apart, to contain a kiln full of the size above mentioned would require 10 lengths of 12 feet inch boards, and each length of shelf would require four pieces of scantling for standards and 12 pieces of board three feet long for cleets as supporters to the shelves and eighteen boards of 12 inches in width to form the shelves, altogether about 3000 feet of lumber, worth $10 per 1000 - - - - - - - -	30 00
To render the shed complete, a roof should extend over the whole, projecting three to four feet beyend the out side of the shelves, and the erection tion of which would cost probably for lumber and work - - - - -	50 00
Cost of kiln - - - - - -	50 00
	$255 00

With the above fixtures and the work of two smart active men one thousand rods of good first rate horse-shoe tile could easily be manufactured in from one month to six weeks, of sole tile about 600 rods.

(Written for the Valley Farmer.)

AGRICULTURAL FAIRS.

It may be, that persons who have never made any calculation, will be surprised to learn that the time spent in the United States during the months of September and October, 1857, in Agricultural fairs has amounted in number of days to several years.

At these places there may generally be found a number of shows and other catchpennies, calculated to draw money from the thoughtless, without giving them in return anything like an equitable remuneration.

Besides this there is oftentimes carried on in the very face of assembled multitudes drinking, swearing, gambling and even fighting, to say nothing of the underhanded crime and debauchery transacted under the cover of darkness. Still further back of this we find that days, yea months, are spent by hundreds of individuals in preparing stock with undue and unwarrantable care, (to the actual injury of the animal) in order by hook or by crook, to bear off a prize upon the day of exhibition.

It also happens almost universally that a great many persons are disappointed and dissatisfied on account of supposed partiality or prejudice on the part of the judges, and in making up the awards it frequently happens that premiums are given to articles of little merit and no real value, whilst others really valuable but less conspicuouous, are passed by unnonoticed.

I have by no means enumerated *all* the evils which attend these places, and yet they are pat-

ronized and encouraged by the christian world. Looking at this side of the picture it has been really questionable in my mind whether the amount of good accomplished by these fairs is sufficient to justify their continuance. That there is always a great deal of evil attending them is a fact settled beyond dispute; but whether these things are necessarily so, is another question.

The farmer needs, at least once a year, a season of recreation. If, at this time, he can lay aside all care, meet the whole circle of his acquaintance, talk of a year's experience, and witness the trophies of their industry and toil, thus adding greatly to his stock of general knowledge and useful information, (all having passed off harmoniously,) he returns home a wiser and better man. He sees what *has been done* by others; he *profits* by their experience; he is pleased, satisfied and encouraged, and is conscious, finally, that a new stimulus and a new impulse has been given to him in the various departments of industry, which might have long lain dormant had it not been for the scenes he has just witnessed.

It has been my privilege, during the past year to attend fairs in different portions of our happy country, and whilst I have seen much that has been truly gratifying, I have also witnessed other scenes which call for amendment. First of all, sufficient exertion has not been made to *prohibit entirely* the use of all intoxicating drinks *on* and in the *vicinity* of the fair grounds. In nine cases out of ten the disturbances which take place may be traced to this cause. For this there is certainly a remedy. Again, if the intrinsic value of any premium is sufficient to make the obtaining of it a *money* making operation the object, (viz: a *laudable* emulation to excel,) is lost, beause persons will spend time in producing an article or in preparing stock that is really no benefit to any one else, whereas the object ought to be in the department of fruits, vegetables, &c., to adopt a course of culture which all may profitably follow, with stock, to use no exertions to deceive the eye of the judges, &c., &c. Again, it is customary to give the highest premiums to the best bull, stallion, jack and boar, these generally being about equal. I suggest that for the best and greatest display of fruits, and for the best and greatest display of vegetables, and for the best and greatest display of utensils and implements pertaining to farm husbandry, there ought to be premiums given of first class value. The wealth of our country may consist chiefly in her stock, but her wealth and luxury are supported in a great measure by the productions of mother earth, and certainly he who by hard labor and exertion, makes the best display in the last named departments merits as large a prize as he does who simply, by paying out his thousands, imports an animal, deemed by the judges to possess superior excellence. Again, in breeding classes, it often happens that sufficient attention is not paid to the merits of an animal, judging by what they have done. In the exhibition of gaited horses the ring is too frequently made a race track, thereby cultivating and encouraging a feeling very deleterious to the youth of our country.—In the preparation of stock for the day of exhibition, in too many cases the creature is almost made an idol of by the owner or exhibitor. In short, the stock department receives and engrosses too much attention, whilst the other branches of the exhibition are neglected. More attention ought to be paid to the cultivation of *fruits, grains* and *vegetables*, also requiring accompanying statements, (written,) showing *how* these articles were produced. More encouragement ought also to be given to the fine arts, and to everything else calculated to refine the taste or beautify our homes. More premiums and better premiums ought also to be given for the production of the best essays on various subjects connected with our agricultural welfare.

I note some facts in conclusion. 1st. These fairs are too common. If several counties (where there is but a meagre display) would unite in forming district associations, the effect would certainly be much better. 2d. By common consent, all stock (of certain kinds) ought to be reserved until the annual fair, for a day of sale. Buyers would then prepare themselves to attend, in preference to scouring the country to make their purchases, and could actually afford to pay more liberal prices. This would add another valuable feature, and give permanence to each association. 3d. Throw the doors open. Persons nearest any locality have in many respects the greatest advantages. If you can beat fairly, do so, but if not, let your neighbors, from adjoining regions, carry off the prizes, and be content with seeing what they have done it with.

The time of the annual meeting in many societies is near at hand, and consequently the time has come to mark out a better course for the future. If there is not reform in many places and many particulars, these annual festivities will soon be numbered with the "things that were," but if properly conducted they may yet conduce largely to the interests of our agricultural community. ****

Crops, &c., in Texas.

Dear Sir:—Notwithstanding the extremely dry season of the northwestern part of this State, during the cropping season of '57, the "hedgerow" wheat, with only four and a half inches rain, has produced an average of ten bushels per acre. Corn crops at the same time have been almost an entire failure. Travis and the surrounding counties have not corn enough for bread.

Those portions of the State, however, lying further south and east, (nearer the Gulf,) have produced well.

Farming in this State, between 97 deg. and 99 deg. west from Greenwich, should not be depended upon; but east of the first named longitude, and in the bottoms of the Colorado, Brazos and Trinity rivers, fine crops of cotton generally pay the planter, and corn fares equally as well.

Here, in the northwestern part of Texas, stock raising is pursued with entire success. Thousands upon thousands of cattle range upon

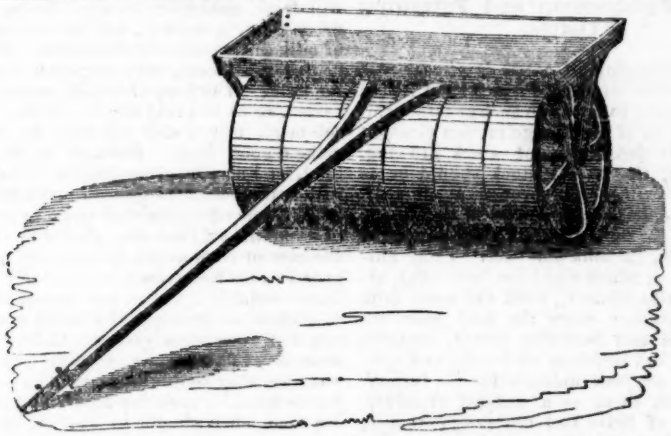
the Musquit and Sage grasses, and are in as fine order for beeves in January as in June.

The several varieties of *Cactus* growing and flourishing in this part of the State, renders it apparent that the aridity of the atmosphere forbids its devotion to farming pursuits of any kind as a profitable business.

Two and a half cents per pound is all that is asked for fat beeves, and if the drovers of the States would but come here and make up their herds, there would not be so much complaint of the "high prices of beef" as at present exists.

TEXAS.

Cypress Springs, Texas, Nov. 7.



FIELD ROLLER.

Among the many new and valuable farm machines, the roller seems to be the slowest in coming into general use—not, however, because its advantages are not apparent to every observer who has given it a trial, but because its use does not secure the saving of so much labor as some others, nevertheless it is one of the most important machines upon the farm.

The roller is useful on light soils, and on heavy clay soils that are liable to break up in lumps, it should be regarded as indispensable. Corn cannot be well worked, nor will it yield a full crop unless the lumps are crushed with a suitable roller, which would otherwise remain unbroken throughout the whole season. In seeding small grain, either in the spring or fall its use is often equally important.

Grass and meadow land should always be prepared with a roller, and it is equally useful to run over the meadow in the spring, to level and smooth the surface in order the better to prepare it for the operation of the mowing machine.

There are various methods of making a field roller. One that will answer the purpose, may be made of a log, say two feet or more in diameter, if solid, it should be of some light timber. A better one is made of a hollow log, made in two lengths, each of any convenient length—say from 3 1-2 to 4 1-2 feet long, and from 2 1-2 to 3 1-2 feet in diameter. These should have heads, or cross arms, securely fitted to them, through which an iron rod runs, and upon which the rollers revolve. The advantage of having the roller divided is that the team can turn with it with greater convenience than when it is in one entire length, as one part revolves one way in turning while the other runs the other way. The heads of each roller should be fitted with iron boxes, suited to the size of the rod. The rod is secured to a frame sufficiently large to admit of a free action of the roller. Above this frame, a box, the entire length of the roller, may be formed, into which stones, grubs and other obstructions may be thrown that are found in the field while rolling. A tongue is fitted to the frame, after the manner of a mowing machine. A more complete roller is made after the same fashion, by using 2 1-2 inch oak plank in the form of staves; these may be spiked on to thick, solid heads, but a better plan is to use castings, something like what machinists term a *spider*, upon which they form their drums for running machine belting. These castings are made with a *flange*, with bolt holes, through which the staves are secured, with nuts and screws. After the staves are neatly fitted and bolted on to the castings, a hoop or tire, three inches wide and three sixteenths of an inch thick, should be firmly put on to each end of the rollers. Rollers made in this way should not be less than 3 1-2 or 4 feet in diameter.

Another excellent plan for a roller is that made of cast iron. These are made in four or six sections, and revolve on an iron rod, like those made only in two sections, as described above. These are usually kept on hand at the seed and implement stores. We are indebted to Clark, Plant & Norris for the above cut, illustrating a roller of this kind. In our next, we shall give an illustration and description of Crosskill's Clod Crusher.

Stock Raising Department.

PREMIUM ESSAY
ON THE
Rearing, Management and Fattening of Cattle.

The proper rearing of cattle is a matter of great importance to every farmer, and I shall endeavor, briefly, to lay down such general principles as may be of advantage in this pleasant and profitable department of stock growing. In the outset, the parent stock should be as good as are within our proper attainment. The leading objects had in view in the raising of cattle, are for the dairy and for the butcher—in other words, for milk and beef. Those animals, therefore, which yield the least offal, arrive at maturity earliest, yield the most milk of good character, carry the flesh upon the most valuable and desirable points, consume the least food in furnishing such milk and beef, are certainly the best animals for the farmer. I may premise, then, as a general principle, that animals of loose and coarse appearance, large bone, heavy neck, with large, down-hanging dewlap, should be avoided; while animals of yellow nose and skin, (being the best index to the handling qualities of the animals,) waxy horns, sprightly, expressive eyes, small, clean neck, great width behind the shoulders, good depth of body and flank, straight, flat back, wide across the hips and loins, and heavy in the hind quarters, should be selected. These should be free from any disease, and as far as possible, should have descended from sound, healthy animals. Heifers should be about three years old at the time of bringing forth their first calf. They should be in good condition, but not too fat. Before calving, they should be made gentle by feeding them, and learning them to be rubbed and handled. After calving, the great attachment to their calves, and the extreme excitability of their natures at such periods, render it more difficult to handle them, and habits are readily contracted which may materially detract from their value. All the milk, except the allowance for the calf, should be extracted from the bag, as the lacteal organs will be thereby excited and encouraged, and a foundation laid for those milking properties which so greatly add to the value of the cow.

It is important to breed cows, so as to avoid their bringing their calves in July or August. Should they bring forth in either of these months, there is great danger of losing them, from extreme heat and an undue accumulation of milk, at all times, in warm weather. When there seems to be a great accumulation of milk before calving, the cow should be confined to dry food, and have plenty of shade and water. Take advantage of the first efforts of the calf to suck after being dropped, extract all the milk from the bag, except a scanty allowance for the calf; keep the calf a little hungry; suckle it frequently, and keep the bag as free from milk as you can, to do justice to the calf. A healthy action of the lacteal organs will thus be induced, excitement subdued, and disease avoided. The cow, in the meantime, should have been kept as quiet as possible, and as much in the shade as circumstances will permit. Cut oats, slops of any sort the cow will drink, cabbages, turnips, clover hay, and green food, generally, add greatly to the yield of milk during the winter months. If cabbages be fed too freely, they impart a bad taste to the milk. The food of milch cows should be varied, so as to avoid cloying them. Corn and cob meal, mixed with cut oats, hay or fodder, make a good feed. Nubbins are an excellent food, and may be given freely. The cow goes with calf about nine months and ten days.

Bulls may be permitted to go to cows at fifteen months old; but they should be taken from the cow so soon as she is properly served. A promiscuous intercourse should not be allowed. Many valuable bulls are rendered entirely worthless as breeders, by being permitted to run with cows when young. Calves should be weaned at about six months old. Before weaning, they should be learned to eat. In order to do so, a rack for hay, and a trough under some shed should be placed, in which to feed cut oats, bran, meal or other food to them. After being weaned, they should be turned upon good bluegrass, rye, wheat or barley pasture. They should have access to dry food, clover or timothy hay, or even wheat or rye straw will be of advantage to them, in preventing that looseness of bowels consequent upon eating green food entirely. They should be protected, so far as practicable, against the cold of winter. Ricks of straw, or stacks of any sort, will afford a tolerable protection. Their handling should be a continued process of fattening, if intended for beef. All animals intended for breeding purposes, should be kept in good condition, but not too fat, as their breeding properties are injured by an excess of flesh, and their offspring will be feeble, and wanting in constitution and vigor. At the ages of one and two years, fodder or corn in the shock may be fed to cattle. They should be salted regularly once a week. Neither milch cows nor calves should be housed too closely. The impure air thrown off in breathing, and the stench arising from their excrement, create a vitiated state of atmosphere extremely unhealthy, and is, I conceive, the fruitful source of a disease now prevailing in many sections of the country, in which housing and high feeding of cattle prevail. While the best protection practicable, should be given cattle in cold and inclement weather, to preserve their health, they should be permitted to lie out when the weather is fair.

It is poor economy to feed tough, wet fodder in rainy weather to cattle. At such times they should be turned upon bluegrass pasture, or suffered to run to clover or timothy hay, or even a rick of dry straw is vastly preferable to wet fodder, which cannot be pulled to pieces and eaten. Dry food from the barn may be fed to advantage upon some firm, dry piece of ground. Light, porous, or thin, poor land may

be set in grass to advantage by feeding bluegrass, timothy, or clover hay to cattle upon it. To the first, it gives the requisite compactness to hold grass well. To the last, the droppings of the cattle, and the litter of the hay, afford that fertility of soil and protection against the rays of the sun necessary to insure a good stand of grass. In fattening cattle for the butcher, those of light weight should be fattened as much as possible upon grass, as only the heavier order of cattle will pay well for transportation by railroad, or otherwise, to distant markets. If only a few cattle are to be fatted, troughs may be erected, in which cut oats, straw or hay, with which corn and cob meal, wheat bran, &c., may be mixed to suit the feeder. Nubbins may be fed in this way to advantage, suffering hogs to run with the cattle. Varying the feed to prevent cloying is important. If a great number are to be fatted, corn in the shock should be given in such quantity as not to cloy, commencing at such time as to feed away the corn designed to be fed, so as to meet the spring grass, taking care to increase, rather than diminish the feed, to the close of feeding. Turn upon good grass, and the cattle will soon be in fix for market.

Cattle of heavier order, designed to be full fed, should be treated as above described, and, if not fully fatted, should be fed the ensuing winter. Hogs should, in all instances, be permitted to follow cattle, allowing about three hogs to each steer. If hogs cannot be had, sheep follow to advantage, picking up the clean shattered corn; but hogs only should be relied upon to pick up the droppings of the cattle. If fodder be scarce, by providing three feeding lots, of such form as to be turned upon easily, the fat cattle may be turned upon the first and fed; when turned upon the second, stock cattle and sheep, or stock cattle only, may be turned upon the first; when the fat cattle are turned upon the third lot, stock cattle may be turned upon the second, and the hogs upon the first; or if only two lots be provided, then letting the stock cattle and hogs follow the fat cattle, in the order above named, turning the stock cattle and hogs in at the same time. Corn should have been hauled and scattered before turning the cattle upon it. The better the condition of the cattle to be fatted before feeding, the more profitable will be their handling. Cattle fed upon bluegrass or timothy land, tend to increase the grass crop greatly, the grass in the spring soon overreaching the litter upon the ground, covering it, and preventing the escape of its fertilizing principles, appropriating them to the benefit of the land and its own vigorous and thrifty growth. In conclusion, I will add, protection in cold and inclement weather, regular feeding, freedom from excitement, careful and gentle handling, are important in the successful rearing of cattle.

W. H. Campbell.

Amictia, Garrard Co., Ky., Dec. 28.

No department of farming is more pleasant and profitable than that of raising stock. The farm is constantly growing richer and better where stock is kept in large numbers.

[For the Valley Farmer.]

Cheap Grass Lands and Grazing.

Messrs. Editors:—In consequence of the increased price of live stock over the country, it becomes of high importance to discuss the means of raising it.

Wherever a large number of animals are kept and of superior quality, it is always noticeable that extra attention is paid to providing ample grazing land, and farther, when such is the case, individuals accumulate more wealth, lands receive more care and permanent value than when a constant succession of crops get almost sole attention. It is true, we have got a large breadth of grey limestone, or barren land, so called, peculiarly adapted for cropping, being rather dry for grass, except clover. On the other hand, the blue limestone land, of our upper counties has been skillfully developed in a grazing direction, with remarkable success. But in these times when land bears, generally a considerable value, much of it, beyond what ordinary capital can reach, it does seem to me well enough to look round and find, whether or not, newer and cheaper grazing fields cannot be made in our own old State, which would be more convenient than the prairies of the far West, and though distance did not lend them as much enchantment to the view, the proximity would lend more value to the flocks and herds. As the richest and most fertile lands become settled and cultivated, there is naturally a demand springing up for the cheaper and less fertile districts to breed and raise animals up to that certain point, when the abundant harvests of the rich lands are ready and suitable to give the finishing touches of fat and flesh.

Travelling southwards through Hardin county, until Grayson is reached, there commences quite a large area of the cheaper priced, less fertile corn and cropping lands, comprising Grayson, Edmonson, a large portion of Butler, Ohio and Breckenridge counties, chiefly laying on sandstone rock, and it is at once observable as the limestone is left behind, that not only the timber, but the corn stalks, straw of various crops and grasses, all shoot up taller and more bulky, notwithstanding that the produce of grain is commonly less; now this surely indicates some natural adaptation, which man, in his search after advantages should take advantage of, also on entering these districts during the seasons of extreme drouth, the growth of both fields and woods presented a greener appearance to the eye than did the limestone land, so it is not dry in its character, neither is it swampy. Ireland is well known to produce more bulk of straw, though less of grain in the cultivated crop than England does, and that it is also, perhaps, the best grazing country in the world. Irish grass-fed cattle and sheep are the fattest that reach the Liverpool and Manchester markets.

Altogether from these symptoms and some experience in these counties, I do not hesitate to pronounce the lands chiefly adapted for grazing and raising young stock, of all kinds, up to that certain point at which the surrounding counties need them. As is well known, these parts are

sparsely settled, some portions are very much so, tens of thousands of acres may be met with of almost unbroken wood in single bodies on the large surveys—the settlers, generally speaking, are not rich, nor employing much energy in developing its resources; in its present condition it is, in point of fact, comparatively lost to Kentucky. But whether its time is yet come, and whether it yet offers a fair enough field for development by capital and enterprize, is simply a question of profit and loss—simply if used in the manner nature has indicated its adaptation, whether it will pay for such use and occupation.

Having become posseseed of a considerable tract of land in Grayson county, I have been experimenting upon it, and trying to answer the above question for myself, and I have arrived at the conclusion that it will do I found that the ordinary uplands, with common good cultivation, produced about 30 bushels of corn, 15 bushels of wheat, and about as much oats and tobacco to the acre as most land—but I did not think those crops would justify very exclusive attention to cultivation, at least not as well as where the land, although high priced, would nearly double with the same expense of cultivation, and greater proximity to market. On the other hand I saw when the land was put down in grass, then it was comparatively free of expense and whether it took one, or two, or three acres to graze a large steer, it could cost no more in attention, to do so, than the very best blue grass lands except the additional fencing, and with the convenience and quality of timber there, even that might form an exception, whether a steer grazed on Grayson land, with as much as he can eat, would get as fat as if grazed on the best blue grass, may well be doubted, but to know the difference, an equal start should be given, not the unequality of start that is now taught, those turned out on blue grass, in good plight, and corned during spring, while those in Grayson are wintered, just so that they don't die, and turned out. The price of lands, in this latter region, in large bodies, don't rate at present, over $4,00 or $5,00 per acre, so their whole cost don't amount to more than the annual interest upon the money invested in the blue grass lands. To be sure, we all know that nature has made a considerable difference in the two places, and man's handy work has made a still greater, but I doubt if any man can show the intrinsic value and profit of the larger investment to be as great as the smaller, and I think it likely, on investigation to be found that cattle, sheep and horses, can be produced for one-third the money so far as the cost of land is concerned—in Grayson and surrounding counties, that it costs in Bourbon and surrounding counties. If so, I would just add, that men generally have kept a strict eye to the actual value in the buying, selling and investment, and that fashion is likely to continue, though there does seem some disparity of estimate between those two regions, waiting adjustment.

In order to obtain sufficient extent of grazing to make it worthy of attention, I had to adopt the plan of sowing grass in the woods, as well as on cleared land; sowing in the woods I did not understand quite enough about at first, but soon found what seemed the best plan there. It is this: deaden the timber during winter or spring leaving about five trees on an acre; burn the leaves as early as they will burn clean; sow the grass in January or February, not later than the beginning of March. If the leaves have only got completely burned and enough seed put on, I have never seen that management fail to give a good set of grass. The cost per acre of doing this, has been fifty cents for seed, twenty-five cents for deadening and twenty-five cents for sowing, &c., or a total of one dollar per acre, besides the fencing, and as that much depends on the number of acres fenced in one boundary, I can merely say that making the rails and putting them up costs one dollar per hundred without boarding. The grasses I have derived most benefit from, are herds grass and blue grass, though the soil is not reputed to suit the latter, I have derived much benefit from its mixture. Orchard grass, too, has done well. The first season after sowing, it should be pastured none till August, not much then, and not any in winter. The second season, in May or June, the bushes have to be cut away at a cost of one dollar and a half per acre and no pasturing allowed until the grass is seeded and ripened, then it ought to be all right for use.

The stock I have paid most attention to, is sheep; the land was plentiful and I knew they liked a wide range. The kind of sheep I concluded to keep was the Merino, the Spanish variety—obtained from the East. I believed them to be the only kind that had been successfully kept in large numbers together in this country. It is a settled point in the East that this wool can be grown cheaper, pound per pound, than common wool, and is worth one-third more money per pound. It is true they are smaller than the favorite breeds of Kentucky, but can only eat according to weight. My views farther, were, that they are more manageable in large numbers, where suitable arrangements are made and more certain to yield a regular return, especially for the capital invested, than cattle, because the wool and increase are got annually for sale or use. Then I knew one shepherd could attend to one thousand of them, with assistance in making hay for wintering; and presuming good management, they would produce, calculating moderately, $2,00 per head, or $2000 gross income. Now it is known to take several men and mules to raise corn and hogs to that amount. I expected at first the sheep to require less winter food to keep them well than I find they do, though that depends on the quantity of grass lands for the numbers kept. This was merely an error of mine, based on experience elsewhere—no fault of the sheep. The difference of thus enriching the land by grazing instead of exhausting it by crops must not be overlooked. If it means anything it must mean increasing the farmer's capital, because the various prices of lands show that he does not estimate wealth by the number of acres, but by what the acre can do, the growing capability that is in them. The Merinos are perhaps best adapted for the second and third class lands where large flocks are wished, and the aged weth-

ers and ewes to be drafted from them annually in the fall, to the richer districts, the former to be fattened and the latter to have one crop of lambs taken from them, sired by long wooled rams, then fattened. This is the system in the East, and the invariable system in Great Britain with the mountain breeds of that country.

The importance of sheep is hardly yet realized in the West. Excepting Australia, with her peculiarities, all countries thinly settled, in a rough state, have kept comparatively few sheep, but have always increased as the country improved. Forty years ago the vast mountain ranges of Scotland were pastured chiefly with cattle. Now it is just the reverse; it is common to find these mountain farms with from 5,000 to 20,000 sheep on them as a regular stock, summer and winter, pasturing no more cattle than the shepherds' cows. One intimate friend of my own has 40,000 as a regular stock, and keeps no cattle but the cows. So important had sheep husbandry become then, several years ago, that it was estimated to yield three-fourths of the whole landed revenue of the country, and it increases. In England and France, too, that stock has continued to receive more attention. The fact that they have decreased in our eastern States does not affect the rule, because they have merely yielded the trade to the West, mean time. The foot print of the sheep in those European countries has been likened to a golden print because of their profits, and probably because they give both meat and wool; as we all need to be clothed as well as fed, there is some importance in this.

The sheep have done very well with me but I don't advocate them in those counties I have named to the exclusion of other stock. I only suggest them as suited to the place, safe in returns, and likely to increase in demand. Cattle and horses have thriven to my entire satisfaction Raising stock hogs, too, is very suitable there. Besides the timbered land, I have sown in grass, I made two enclosures in the unimproved woods, one of about 1,000 acres, and another about 4,000 acres, for the purpose of keeping stock in some certain range, and taking the benefit of the acorns, when a mast comes. One of those late dry seasons, I sold the mast in the larger enclosure, for $2,000 to fatten hogs upon.

The country is abundantly watered by creeks and springs, and though the herbage is not as abundant as in the low creek bottoms, I believe less of it will do the animals equal benefit, and its hay is heavier to its bulk. This must not be overlooked.

I should also add, that although I attach so much importance to grazing there, it is not because the land is too hilly for cultivation. Indeed it generally lays level enough, with a handsome undulating slope, except at the brakes of the creeks which are quite hilly, but the soil richer than the levels.

In these few remarks, I hope I have not been too egotistical, in offering them as you were pleased to request. I certainly do not arrogate to myself any superior knowledge of these Green river lands, nor near as much as many men there, but I would be glad to see those districts attract the attention from capital and enterprize. I believe they are entitled to receive a fair estimate and credit for what they can do, and when they arrive at that position they will be more forward than at present.

I am yours, truly, ROBT. GIBSON.

REMARKS:—The writer of the foregoing is a native of Scotland—a gentleman who has all his life been familiar with stock raising, and particularly sheep, in the grazing districts of his own country. Having inherited, from early times, a considerable tract of land, in Grayson county, Ky., and on his first visit to this country was so favorably impressed with the character of this section of the country and its perfect adaptation to sheep husbandry, that he at once determined to embark in the business on an extensive scale. His efforts thus far have proved altogether satisfactory. We have many thousands of acres of similar land in Kentucky that could be turned to the best account, if prepared for sheep grazing. There are also hundreds of square miles, embracing the mountain portions of Kentucky and Virginia, superior even to the sheep lands of Scotland, that afford large revenues to the proprietors. If the owners of these lands would clear them up and stock them with sheep and place them under the charge of faithful Scotch shepherds, (who can be obtained without difficulty,) every acre of these lands could be turned to profitable account.

We thank our correspondent for the information he has given us, and hope he will let us hear from him again.

IMPROVED BREEDS OF SWINE.—The Suffolk is a hearty, quiet, thrifty breed; they grow rapidly, are docile, contented and good looking.—They are well-formed, compact, short-legged, hardy animals, equal in point of value, Youatt says, to the best of the Essex, and superior in constitution, and consequently better adapted for general keeping.

The Essex is a breed highly esteemed by some—the best breeds are entirely black, and they will sometimes attain the weight of nearly five hundred pounds. Some prize them for their rapid growth and aptitude to lay on flesh, as well as for its excellence.

The Berkshire is also a fine breed, with something of the general shape of the Suffolk Essex, but quite different in color and the length of the hair. The skin of the Berkshire is thin, the flesh firm and well flavored, and the bacon very superior. The Berkshire and Suffolk have been favorably mixed.—*N. E. Farmer.*

Horticultural Department.

THE PLANT HUNTER.

We were struck by the title of a new book by Capt. Mayne Reid—"The Plant Hunters." The Captain says of the plant-hunter: "To his labors the whole civilized world is indebted—yourself amongst the rest. Yes, you owe him gratitude for many a bright joy. For the varied sheen of your garden you are indebted to him. The gorgeous dahlia, that nods over the flower bed—the brilliant peony, that sparkles on the parterre—the lovely camellia that greets you in the greenhouse—the kalmias, the azaleas, the rhododendrons, the starry jessamines, the jerania, and a thousand other floral beauties, are, one and all of them, the gifts of the plant-hunter. By his agency England—cold, cloudy England—has become a garden of flowers, more varied in species, and brighter in bloom, than those that blossomed in the famed valley of Cashmere. Many of the noble trees that grace our English landscape—most of the beautiful shrubs that adorn our villas, and gladden the prospect from our cottage windows, are the produce of his industry. But for him, many fruits, and vegetables, and roots, and berries, that garnish your table at dinner and dessert, you might never have tasted. But for him those delicacies might never have reached your lips."

These remarks of Captain Reid made us think how greatly America, also, is indebted to the plant-hunter; in other words, how many of our common trees, shrubs, kitchen vegetables, &c., have been introduced from other countries. If we had none but indigenous plants, our tables would present quite a different appearance. No one in our country sits down to a table on which there are not the productions of plants, introduced from foreign countries. There is the cabbage from the shores of Europe; the carrot from the island of Crete; the celery from Great Britain; the egg-plant from Africa; the melon from Persia and Afghanistan; parsley from Sardinia; okra from the West Indies; the parsnip from Europe; the bean from the East Indies; the cucumber from Tartary and India; the radish from China; the onion from Spain; rhubarb from Asia; mustard from Egypt; lettuce from Egypt and the island of Cos; the beet from the south of Europe; horse-radish from Europe, &c., &c.

If we come to fruits we have the peach from Persia; the apricot from China and Japan; the garden currants from the north of Europe; the quince from Austria, besides various kinds of apples, plums and pears from Europe.

Among ornamental trees, we have the Norway spruce; the Chinese arbor vitæ; the English maple; the horse chesnut from Northern Asia; the Chili pine; the cedar of Lebanon from Syria; the deodara from Nepaul; the cryptomeria from Japan; the laburnum from Europe; the magnolia conspicua from China; the pawlonia from Japan; the European silver fir; the Scotch pine; the white poplar from Britain; the Lombardy poplar; the weeping willow from Asia, &c.

If we go into the shrubbery, we shall find some of our most common shrubs to be of foreign origin. Here we have the althea, whose botanical name *hibiscus syriacus*, denotes its origin; the lilac from Persia and Hungary; the Japan quince, or *pyrus Japonica*; the dwarf double flowering almond from China; the privet from England; the corchones, or kerria Japonica, from Japan; the Tartarian honeysuckle; the common syringa from the South of Europe; the snowball from Europe; many of our beautiful spireas from Japan and other foreign countries; the forsythia viridissima from China; the weigelia rosea from China, &c.

Among our garden flowers, the specific names *Japonica*, *Sinensis*, or *Chinensis*, *Nepalensis*, *Orentalis*, &c., show the origin of large numbers of them. We cannot pretend to make an enumeration of the exotic flowers which have become so familiar that we look upon them as indigenous. Dreary would our flower gardens appear to us if all the flowers from other countries were suddenly swept away.

These things show the energy of man. He wanders among wild beasts and venomous reptiles, from the tropics almost to the regions of eternal snow, defying every danger, and enduring all fatigue, for the purpose of finding new plants to please the taste or gratify the appetite.

Putting New Heads on old Apple Trees.

There are many old seedling orchards, or orchards containing grafted fruit, that on trial have not been found suited to the climate or the soil where they are planted. The tops of these may be easily replaced by better varieties of fruit, by cutting off the branches and regrafting. Sometime since, we made a call on a gentleman, an amateur in the way of fruits, residing in Frankfort, Ky., when he showed us two apple

trees, thrt were upwards of fifty years old. In order to improve the quality of the fruit, some six or seven years ago he had all the branches removed at once, cutting them off where they were from two to three inches in diameter.—This was done early in the spring. Each branch put out several new and vigorous shoots. One on each of these was preserved and the *following spring* grafted with different varieties of apples. When this operation was performed the trees showed evident signs of approaching decay. But by this operation nature seemed to revive, and now the old trees present young, healthy, well formed heads, affording, in fruitful seasons, abundant crops of fair fruit.

By giving the branches from the old stumps a year's growth before they are grafted they afford a more suitable size for grafting, and the circulation being more vigorous in the young than in the old stumps, as usually grafted, a much better head is formed, while the grafts are less liable to be broken off by the winds.

In reviving old orchards in this way, it is important to manure the ground with stable manure, wood ashes, &c., and give it a thorough cultivation for a year or two, and the size and quality of the fruit will be much improved.

THE GRAVENSTEIN APPLE.

The Gravenstein is one of the most showy, large and beautiful apples that is grown in this country. It has been known here for about twenty five or thirty years. Downing describes it as a "superb looking German apple, which originated at Gravenstein, in Holstein, and is thought one of the finest apples of the north of Europe. It fully sustains its reputation here, and is, unquestionably, a fruit of rare quality," &c.

In a late number of Hovey's Magazine of Horticulture, is published a letter from Capt. John De Wolfe, of Dorchester, Mass., in which he claims to have introduced it into this country. He says:—"Being at Copenhagen in the fall of 1825, I noticed at the wharves a number of small craft from Holstein with fruit, principally apples. I bought some which were recommended as the Gravenstein, a very superior apple, highly flavored as to taste and smell. I was so much delighted with this fruit, never having heard of it before, and being desirous of cultivating it in my little garden in Boston, I requested my friends Good, Raynolds & Co., to purchase for me, at the nursery two trees of that kind of fruit, and to be sure that they were genuine Gravenstein, which they did. On my arrival in Boston, in May following, the trees being nearly seven months out of the ground, I had some doubts as to my being able to make them live. Knowing Gen. Dearbon to be an amateur in these matters, I presented him with what I thought to be the best one, and planted the other one myself; they both lived and grew vigorously. About a year after I moved to Bristol, Rhode Island, and took my tree with me and planted it there, and when I left that place, several years subsequently, it was in a bearing state.

I was desirous to know the origin of its name and place, and was informed that it originated in a nobleman's garden in Holstein, near to a family grave stone,—hence the name Gravenstein."

It is probable that this famous fruit was also imported by others, for, in a letter from Judge Buel, dated Oct. 11th, 1829, accompanying a quantity of apple trees presented through him to the Massachusetts Horticultural Society, he enumerates the Gravenstein, and remarks that this, and other German sorts were imported by Mr. C. Knudson, a German nurseryman.

The Gravenstein is now generally known throughout the country. It succeeds well with us and ripens in September.

Remedy for Black Knot in Plum and Cherry Trees.

In many parts of the country, the disease known as the black knot on plum trees, is more formidable than even the mischievous little curculio. In many parts of New York and other places, so destructive has this disease become, that many fruit growers have abandoned the culture of the plum altogether. We believe it has not been clearly ascertained, what is the cause of these excrescences, which are suddenly formed on almost every branch of the tree. It is probable, however, that it is the effect of some insect, that deposits its egg in the bark of the young wood of the branches. The usual remedy proposed is, to cut off and burn every branch upon which the disease makes its appearance. On a late visit to the garden of Dr. E. P. Byram, of Cooperstown, Otsego county, New York, he showed us a number of trees that had been subject to the black knot, and some were so much diseased that he had found it necessary to cut off the branches of the entire top, and form new heads. But these again were soon attacked in the same manner. These, and some others, not severely cut, were treated in the fol-

lowing manner: All the branches, showing any appearance of the disease, were removed, and in the body of the tree, near the ground, he bored a hole with a three-quarters of an inch bit, into the heart of the tree. These holes he filled, in some instances, with salt, and in others coperas, and in some trees he bored two holes, and into one he put salt, and in the other coperas. All of the trees thus treated, whether with salt, coperas, or both, have remained for six or seven years perfectly healthy, making a vigorous growth. Lately, in a few instances, there appeared to be slight indications of a return of the disease, leading to the conclusions that the power of the remedy, will in time, become exhausted, and that a repetition may be necessary. So prevalent is this disease, in this section of New York that cherry trees are also entirely killed by it, in a few years. But the salt and coperas prove equally efficacious in both plum and cherry trees, while trees of both varieties, not thus treated, were entirely killed in a few years. The application was made in the spring. We record this fact that others may make the trial and we hope they will give the public the result. It has often been recommended to sprinkle salt upon the ground under plum trees, to destroy the curculio, before they emerge from the ground. Slight applications may prove beneficial, but it should not be applied in too large quantities. We would also recommend if the salt is to be placed in the body of the tree, that care be taken not to use too much. The coperas alone seems to be equally efficacious and may be used in any reasonable quantity without danger from over treatment.

[Written for the Valley Farmer.]

To Prevent Rabbits from Barking Trees.

Messrs. Editors:—As I have never seen the following in print, I thought it might be new to many of your readers. It is this:

About the time vegetation is killed take the liver of a hog, or other animal, and rub your trees from the ground up two or three feet high, repeating the operation once or twice through the winter. The rabbits will not bite them while there is plenty of the scent of the liver on them.

I have tried the above for three winters and know it to be a good preventive.

Edward. E. Beezley.

Lindsey's Prairie, Ark., Nov. 3, 1857.

GROWING QUINCES.

The quince is among our most valuable fruits, and yet it is one greatly neglected. A few trees will produce all that a family may require, and always commands a good price in market, and it is of that hardy nature, ripening at a season of the year when they can be shipped, with our present facilities, to any part of the country, or even to the West Indies or Europe. In the Eastern markets, and in the markets of the large cities generally, they always bear a good price. The uses and value of the quince, are too well understood to require anything from us on these points. We propose, merely, to speak of the method of cultivation.

The quince, like all other fruits, requires care and cultivation to be productive of good, well developed fruit. The most common practice is, to plant the trees in some out-of-the-way place, at the back of the garden or field, and leave them to contend with the grass and weeds, and the suckers are allowed to shoot up and multiply around the stem until the tree becomes barren and worthless.

The quince thrives best on a deep, mellow, rather moist soil, and requires manuring and cultivation as much as the apple or pear. It is easily propagated by seeds, cuttings or layers. If by cuttings, the pieces should be about twelve inches long, of sound, matured wood; pieces with a portion of the wood two years old are most sure to grew. These should be planted in a moist, mellow, partially shaded situation, and should be set in the fall, or as early in the spring as possible. When two or three years old, they will do to set in the orchard. Transplant the same as apple trees, digging a hole two or three feet in diameter, and filling it up with rich soil. At the time of transplanting, the branches should be well headed back, cutting off at least three quarters of the growth of the last season, and entirely removing all interfering shoots, so as to leave an open, well balanced head. The ground should always be kept clean, and all shoots from the bottom kept off, removing them as they appear, close to the stem. A little care in this particular for a year or two will destroy all tendency to throw up shoots in future. Good cultivation and slight annual manuring in the early spring, the manure well packed in about the roots, will insure abundant crops of fair, large fruit, unless cut off by spring frosts.

There are several varieties of the genuine, but the best for cultivation for the fruit is the common or orange variety.

PLANTING FRUIT TREES.

MESSRS. EDITORS:—As the season for planting trees will soon be at hand again, a few hints on the subject may not be amiss to the inexperienced. I take it for granted that every farmer in our glorious West, where the finest orchards can be raised in a few years, will not neglect to plant at least enough fruit trees to supply his own wants; if he does, he does not yet know his own interest, for what can be more delightful and refreshing than to have a supply of the choicest fruit all the year round, and drink the cider and wine of your own making, under the shade of your own trees? Surely, if this were done more generally, it would do more towards the cause of temperance than all Maine Liquor Laws and other strictures together. But hoping that all of your readers are wide awake to the importance of fruit culture, let us proceed to business, and to do the thing properly, let us begin at the beginning.

SITUATION OF THE ORCHARD.

For your orchard, choose the most elevated piece of ground you have, as the higher the ground, the less will it be subject to frosts, which are so often injurious to the blossoms of fruit trees in the spring. Choose, if possible, a light, friable soil, a sandy loam, if it can be had, which, if naturally too poor, can afterwards be enriched around the trees. It is a well known fact, that fruit grown on high situations is always finer and of better flavor than that grown in bottoms or low lands, and will bring double the price in market.

PREPARATION OF THE SOIL.

Prepare your soil by cultivating it well, several years previous to planting, so that it may be mellow and in good heart. It is a grievous error, committed by many of our planters, to stick their trees into holes dug with the pickaxe into the hard ground, and hardly large enough for the reception of the roots—just as if a tree were a post, and not a thing of life. If you want your trees to live and thrive, give them at least a little labor. You work your corn and potatoes, why not your trees? Be assured they will richly pay you for any little extra labor you may bestow upon them.

Dig your holes in the fall or during winter, so that the earth is exposed to the mellowing influence of the frost during winter; make them large, two feet deep, and four to five feet in diameter. Then plant early in the spring, so soon as the ground can be worked, but not when it is too wet, as it will then clod and bake too much. But as we have come so far, let us first consider

WHAT TO PLANT.

I will give you a list of such varieties as I have tried in our Missouri climate during the last ten years, and found to do well, and to be of good quality and good bearers, and which will give you a supply all through the season:

For early apples—Red June, Early Harvest, Red Astracan, Strawberrry.

For August and September—Maiden's Blush, Sine qua non, Gravenstein.

For Fall and Early Winter—Alexander, Golden Pippin, Yellow Belleflower, Newtown Spitzenburgh, Fameuse, Fall Pippin.

For Late Winter—Newtown Pippin, Michael Henry Pippin, Long Green or Lemon Pippin, Rawles Janet, Nonpareil, Lady Apple, Priestly.

Add to these for preserves and ornament, Large Siberian Crab, and you have a variety of good apples for all seasons, enough for any farmers' orchard.

As to pears, I can recommend as productive and good the following:

Williams' Early, Bartlett, Napoleon, Charles of Austria, Seckel, White Doyenne, Beurre d'Amalis, Beurre Bosc, St. Germain.

Of Peaches—Baltimore Beauty, Early Newington, Double Montagne, Morris Red, and also White Rareripe, Yellow Rareripe, Mammoth Cling, Crawford's Early Melocoton, Crawford's Late, Columbia, Heath Cling.

Of Cherries—May Duke, Late Duke, Belle de Choisey, Black Tartarian, Elton.

Grapes—Catawba, Le Noir, Norton's Virginia Seedling.

Quinces—Orange Quince.

Currants—Red Dutch, White Dutch, Black Naples.

Gooseberries—Houghton's Seedling, Green Prolific.

Raspberries—Princes Fastolff Seedling, Brinckle's Orange, Red Antwerp, Ohio Everbearing.

Strawberries—Large Early Scarlet, Chester.

Here we have fruit enough to satisfy any reasonable man, and fruit upon which you can *depend* in this climate. Of course the list could be swelled *ad infinitum*, but these are good and productive, all of them.

Now let me say a word about choosing your trees. Go to the nearest *responsible* nursery, and select your trees there, from a man whom you know and can trust. Do not get them of any travelling tree dealer or pedlar, who may come to your house with flaming certificates from the East. Remember, my friend, you may not see him again, and if he sells you worthless trash, he will only laugh in his sleeve at you for your trouble. In saying this, do not understand me as throwing imputations at Eastern nurserymen; they may be honest men enough, generally, but we have rogues in the business, too, East as well as West. Remember, that in buying trees you are utterly at the mercy of the dealer; therefore try and deal with an honest man in your neighborhood, on whom you have a hold should he disappoint you. Moreover, Western nurserymen, if they are worth the name, will know which varieties suit you best for your soil and climate.

Then select fine, thrifty, young plants, not tall overgrown trees. It is a great mistake, under which a great many tree planters labor, to plant large trees, with heads formed, and several inches thick, thinking that such will bear the soonest. Quite the contrary, and for a simple reason: a tree has generally roots corresponding to its size, and in taking up a large tree, of course, a great many roots, having spread far already, must be cut off. But it is exactly through these the tree draws its nourishment; a small tree, however, you can

take up with almost all its small fibres unhurt, and it will therefore suffer much less from transplanting. If I were to plant, I would select smooth, straight stems, half an inch in diameter and five to seven feet high. Such will make the healthiest trees; and, moreover, you can train them to any shape you like. They will generally bear sooner, too, than your large trees, which sometimes never recover the shock they receive in transplanting.

But I forgot to tell you the distance you ought to plant them apart. Give apples and standard pears 30 feet square, standard cherries 25 feet, peaches 20 feet, quinces 15 feet. Dwarf pears and cherries, as also all the smaller fruit, properly belong to the fruit garden, of which we may talk hereafter.

Having your trees at hand, fill your holes with well pulverized earth, until you think that the tree, with its roots well spread, will, if you set it, stand about as deep, or a little deeper than it stood in the nursery; form a small hillock of fine earth in the middle of the hole, on which set your tree, having first cut smoothly all such roots as appear bruised or lifeless; then spread the roots evenly on all sides, and fill up with well pulverized earth, which you may press down lightly with your foot, so that all the interstices between the roots are filled; if very dry, you may add half a bucket full of water. Should the summer be dry, mulch around the trees with spent tan, dry straw or grass, leaves, or anything you may find, and cultivate well. I suppose you know how to prune or shorten in your trees when planting, so I have said nothing about that.

GEORGE HUSMANN.

Hermann, Jan. 1, 1857.

[For the Valley Farmer.]

Apple Orchard; Deep versus Shallow Planting.

EDITORS VALLEY FARMER—As I have read a great deal for and against deep and shallow planting apple trees, I am disposed to give to your readers my experience in the matter. In the year 1845, I commenced grafting apple scions, with a view of raising an orchard of just such fruit as would suit my own taste and fancy. In the fall of 1846 I commenced planting my grafts in a piece of ground that I had laid out in a plat for an orchard. The soil was then a clayey loam, laying rather uneven and rolling. I commenced in November, but planted but twelve trees, when I saw an article in the *Valley Farmer against deep planting*, that rather alarmed me, and caused me to stop my planting, as I was planting mine six or seven inches deeper than they grew in the nursery. In the spring following I resumed my planting, digging the holes as I did the previous fall, about four feet across and eighteen inches deep, filling up to the desired depth, with top of the earth, with a little well rotted manure thinly mixed; but my spring planting was different, planting them but about one inch deeper than they grew in the nursery.

The after cultivation of all the trees was alike. At the end of the first year, the trees planted in the fall, and deep, had the appearance of being at least one year the oldest, although the scions were all about the same size when planted. The second year they gained equally as much in size as those of the shallow planting. At the end of the third year they showed a greater gain of wood on the spring planting than either of the previous years; and that year there was some fruit on the fall planted trees. Now they are all eleven years old, and the deep and fall planted trees will girth nearly three times as large around as the shallow planted; and there has but one, of twelve, of the deep planting ever died up to this time, while there is an average of *one in three died* of the shallow planting.

My trees have had thorough cultivation, manuring, care and attention.

Now let me tell about the fruit. In 1855 I gathered on an average, from the fall planted trees, four bushels; the spring planted averaged one and a half bushels. In 1856 they all failed. In 1857 I gathered on an average ten bushels from the fall and deep planted, and from the others two and a half bushels per tree.

In cultivating my orchard, it has caused it to wash and wear away, which is bringing the roots of the trees much nearer the top of the earth than when first planted. In ploughing the ground last spring, I had to run my plough very shallow about the roots of the shallow planted trees, not near so deep as I desired, for fear of breaking and lacerating the roots too much, while at the same time I could plough quite up to the deep planted trees from four to six inches deep, without injuring the roots in the least.

I am now convinced, that *deep* and fall planting *is the best on such a soil as mine.* I have now a large orchard. I have planted some every fall, some every spring, (since 1845,) some deep, and some shallow. I have invariably found the fall to outgrow the spring planting, but I have found the *deep* planting, whether done in the fall or spring, to *greatly* outgrow shallow planting, on such a location and such a soil as my orchard. And another great thing to consider is the difference in their bearing. My deep planted trees have fruited every year, except one—1856—since three years old, while the shallow planted have failed at least half the seasons since they were three years old.

I may, in a future number, tell you what kind of apples I cultivate, and my reasons for cultivating such varieties.

Yours, &c., W. J. J.

Readsville, Mo., Dec. 10, 1857.

(For the Valley Farmer.)

NEW VARIETIES OF GRAPES.

From a friend in Pennsylvania I have recently obtained nine new varieties of grapes, described by him as follows:

1st. *Brinckle.*—Bunch large, nearly color of barley, shouldered; berry, medium size; no pulp; high flavor.

2d. *Clara.*—Bunch large; berry, medium, white, sweet and excellent.

3d. *Louisa.*—Resembles the Isabella, but pro-

nounced better by far by all who have tasted it.

4th. *Raabe.*—Bunch and berry a little below medium; red like a dark Catawba; very sweet and excellent.

5th. *Cassady.*—The whitest of grapes; aromatic and sweet; bunch and berry nearly medium.

6th. *Garrigues.*—Said to be superior to the Catawba and Isabella, and free from rot and mildew.

7th. *Canadian Chief.*—Is a very splendid, large white grape, but may require protection in winter.

8th. *Clinton.*—Small and dark; makes an excellent wine.

8th. *Kingsessing.*—No description.

My object in making this communication is to encourage the friends of vine culture in Missouri and the neighboring States, by showing that the Catawba, which in some seasons proves to be nearly an entire failure, is by no means our only chance. Add the above named varieties to the *Rebecca*, *Delaware*, *Madeira*, &c., (which I expect soon to obtain) to those already described in former communications, and it is evident that we need not give up, if we have not fully succeeded as yet. The more varieties we try and experiment upon, the more certainly will one or the other be found suitable to our climate, and to nearly every one of our numberless locations. Perseverance and care will achieve a great deal. FREDERICK MUNCH.

Marthasville, Mo.

BEST SIZE OF TREES FOR TRANSPLANTING.—The proper size for transplanting varies somewhat with the sort of the tree, and the kind of culture intended. It is, however, a maxim equally well settled, both among theorists and the best practical men, that health, immediate vigor, and duration, are all greatly promoted by transplanting fruit trees of small size—from three to six or seven feet. We are fully aware with what impatience the beginner, or a person who knows little of the culture of trees of this size—one who is eager to plant an orchard, and stock a garden with large trees, thinking to gather a crop the next year. The latter may indeed be done, but the transplanting so affects the tree, that its first scanty crop is followed by a long season of rest, and feeble growth; while the plantation of small trees is making wood rapidly, and soon comes into a healthy and long-continued state of productiveness—often long indeed, before the large trees have fairly arrived at that condition. The small tree, transplanted with its system of roots and branches entire, suffers little or no check; the older and larger tree, losing part of its roots, requires several years to resume its former vigor. The constitution of the small tree is healthy and unimpaired; that of the larger, frequently much enfeebled. A stout and vigorous habit—what the nurserymen call a *good stocky plant*, is the true criterion of merit in selecting fruit trees for transplanting.—*Downing.*

Tree Planting on the Prairies.

Most kinds of forest trees may be easily cultivated, and will grow with the greatest luxuriance if planted on the prairies. If every section of prairie land not otherwise supplied with timber, was planted with a belt of forest trees across the north side, the value of the entire land would be nearly doubled, and the broad, sea-like expanse of prairie converted into the most beautiful landscape the eye ever fell upon, and the health and comfort of the inhabitants, as well as the farm animals, greatly promoted.

Fall is the season in which the seeds of most trees should be gathered and placed in a proper condition, to insure their growth. Acorns, hickorynuts, chesnuts, and the like seeds, will not germinate if they are allowed to become dry after they are gathered. All seeds should be planted immediately in nursery rows, and covered with light mould, or they may be mixed with sand, and placed in boxes exposed to the weather, and planted in the spring. Lighter seeds, such as maple, linden, poplar, elm, ash, &c., may either be planted in nursery rows and covered with light leaf mould, and receive a slight covering of brush, (evergreens are the best,) or they may be planted in frames and protected in like manner, and the trees transplanted when two or three inches high into nursery rows, or they may stand in the frames until the second spring before transplanting. No labor can be expended on the prairie land to greater profit than in cultivating the best kinds of forest trees. Ten acres bordering on the north side of every farm would prove of immense advantage in breaking off the chilling blasts of winter from the crops, the orchards, the animals and the dwelling, besides the constantly increasing value of the timber, which, after the first few years, comes forward without cost or labor. This is a subject worthy of the consideration of every farmer not fully supplied with shelter and with timber. The example of a few, intelligent, enterprising farmers directed to this subject would be followed by thousands, and prove a lasting blessing to the country.

Who will lead in the matter? In Europe, necessity has long since established this branch of culture, which is carried on without difficulty and with the most perfect success.

The Vegetable Garden.

THE CAULIFLOWER.

The cauliflower is one of the numerous varieties of the cabbage family, and deservedly stands at the head of it, for delicacy of flavor. Indeed, I doubt if there is in the whole list of esculents, anything that surpasses a good head of well-dressed cauliflower.

This vegetable is universally esteemed by those who know it. (For I have met with intelligent persons who did not know its uses or value.) I have also notunfrequently seen it spoiled in cooking, being sent to the table broken in pieces, and rendered insipid, and of a bad color, from improper boiling.

It is seldom seen in our markets in any degree of perfection, and always but sparsely in quantity.

This is mainly owing, I know, to there being some difficulty of success with it in our hot summer climate; the hot sun causing it to head-in prematurely, and always in a deformed and imperfect state; the flower or bud, being partly converted into leaves, and thereby rendered almost worthless.

It delights in a deep, rich, cool, and somewhat moist soil, and moderate temperature. On these accounts it succeeds in some Northern localities better than elsewhere, and I have seen it in the Chicago market better grown than any where else in the West; the cool, moist soils of that locality being better adapted for its growth than the sunny slopes of the Southwest.

Nevertheless its perfect production should be an object of emulation both to the amateur who delights in his garden, and the growing of the choicest kinds by his own skill, as well as the private gardener, who is anxious to place all the delicacies of the season on his employer's table.

To this end the writer offers the following as the result of his experience in this climate:

It is of the first importance to have good seed; but as all the seed of this article is imported from Europe, the grower should secure his supplies from the best source at command. The seedsman cannot be too particular, either, from whom he imports; none but growers of the best reputation should be trusted—no honest seedsman will import from an unreliable source.

For the first crop in Spring, the seed should be sown about the middle of September, in light rich soil. As soon as the young plants are large enough to handle, they should be transplanted into cold frames, about four or six inches apart; here they will grow into good sized plants before winter sets in; after that they will remain stationary till towards spring. The frost should be kept out of the frames as much as possible. They should be banked up to the top all round on the outside, either with soil or litter, and the glass kept covered with short litter or straw mats, at night, and during extreme cold weather. Push the lights off, and admit abundance of air during all mild weather, and tilt the back of the lights during all sunny days, if there is no frost inside, and the wind is not severe. If they get frozen in, the best way is to cover up thickly, and let them remain so, during a very severe spell, and as soon as it moderates, let them thaw out gradually, and always in the dark, by removing the covers by degrees, so as not to admit the whole light upon them at once, or while frozen.

The object to be attained is to get them to "head in" before the extreme hot weather sets in; and there is not usually time for them to effect their growth and flower, before that, when planted out in the open ground, as early as they will commence to grow. So to insure success, I have found it necessary to fruit them in another frame. Make up a slight hot-bed about the end of February and put in a foot of good rich soil, and transplant them in it, about fifteen inches apart. As soon as they have got hold and are growing freely, keep the soil about them well stirred, water liberally, keep the frost from them by covering nights, &c., give air freely in all favorable weather, and they will produce their heads early. Later a cold frame will do for a succession; treated in the same manner as the other with regard to covering, watering, &c.

But the bulk of the winter plants will yet be left. These must be planted in the open ground. I prefer to dig a trench a few inches deep, forming a little bank on each side, as I think this protects them some from the cold spring winds that we often have while the plants are small and newly planted. If the soil is not already rich, dig a few inches of rotten yard manure into the trench, and plant about two feet apart. The ground should be stirred frequently and well, and as they advance in growth the soil may be thrown a few inches up to their stems; and if dry weather should ensue they should receive occasional waterings, the object being to make them grow as fast as possible, and induce them to head in rapidly; though it often happens that under the best management those planted in the open ground will be overtaken by the hot weather, and rendered worthless, except for the cows or hogs.

But to those who desire to have a good supply of this delicious esculent, I would strongly recommend providing for the fall crop. The seed for this purpose should be sown at the same time as for the earliest sowing of fall cabbage. They may be treated in the same way, only that they should receive a little extra care and pains in being given the choicest and richest spot of ground and as frequent hoeings as possible; they will thus make large stalks, with a profusion of large leaves, and by the middle of September they will begin to produce their flowers; and if those that are not headed by the time severe frost comes, are taken up with a ball of earth

to their roots, and planted as thick as they can stand in soil in a dry warm cellar, they will continue to produce their heads for several months.

The Brocoli which is closely allied to the Cauliflower, and little if any inferior to it, will also succeed admirably as a fall crop, treated as above; especially the Purple Cape, which has purple heads instead of white, but is undoubtedly hardier than any other variety.

Some of the varieties of the Brocoli, (besides the Purple,) have straw-colored and greenish heads; but the Cauliflower should be quite white and close. They should be sent to the table entire and unbroken, after being boiled slowly in clear water, with a spoonful of salt, till they are almost as soft as jelly.

C. Sanders.

St. Louis Fruit Garden, Jan. 25, 1858.

EARLY TOMATOES.

Messrs. Editors:—The following is a good way to get tomatoes extra early on a small scale, for the supply of a family. It would probably take up too much of the market gardener's sash room to pay for its adoption with him. Select the earliest maturing kind, and when you make up your first hot bed, sow a few seeds thinly in a pot, and put it into the bed. As soon as the plants get into rough leaf, take about a dozen and plant into another bed, that may be at work for cucumbers or salad. A small space at top or bottom of the sash will do for them now.—Plant them down to the first leaves, and they will root up all along the stem. Let them be near the glass to keep them stout and stocky. When they reach the glass and begin to get together, transplant them again into another frame, giving them more room. Still putting them in up to their lower leaves. They may be transplanted in this way three or four times, giving them more room and setting them deep each time.

By the time they can be planted out they will have become large bushy plants, with short stems and spreading branches, with flowers and fruit already set on them. Do not plant them out until all danger of frost is actually over, else they will receive a check which will more than counterbalance all you have done. I should have said they should be carefully and well hardened off, before planting out. This process will hasten their maturity and bearing state. When ready to plant, select a warm, sheltered spot in a mellow, pulverized soil. Have your holes all made; remove the plants with the shovel or spade and place them directly into their places, without any further shifting, or loss of soil, or roots. They will have formed a mass of roots that will cause a large ball of earth to hang to them, and will be ripe two weeks earlier than those treated in the ordinary way. C. Sanders.

The Apiary.

[For the Valley Farmer.]

"BEES AGAIN."

Messrs. Editors:—On getting all the numbers of the *Valley Farmer* for the year into a book, I find by a sort of review, I have neglected one article that calls for some further notice. I allude to that of Mr. Link, of Tenn., in the Sept. number.

He regrets that I "so entirely misread, what was said on the most important point," relative to "robbing the bee-hive but once in a season." He says, "Read again, Mr. Quimby." I find on reading page 86, March number, this sentence, "Rob the hive but once in a season, however good a one it may be for honey, for bees often become disheartened when their hive is oftener opened, but after being fitted up for winter supplies, as many caps may be taken as they will fill, which depends upon the season and strength of the swarm." There seems to be a little obscurity—a sort of contradiction in this sentence, and his explanation on page 281 has made it no clearer. This point is closed up in this way. "Thus I induce them to fill as many caps with honey as practicable, after robbing once the main hive, and they fill it up for the winter supply." A little explanation is needed after all, for my "obscure understanding." I have been simple enough to suppose, that taking off boxes or caps, which the bees have filled with honey, meant, neither more nor less than robbing them. I find on "reading again," that he says, "as many may be taken as they will fill," that is, "after robbing the main hive once." Does taking these boxes mean robbing? if not, what does it mean? If it means robbing, perhaps he meant, it is not robbing the "main hive." If the main hive is not robbed, what is? It would appear as if *he* made a difference in the matter—taking these boxes from the "main hive," and "robbing the main hive." If it was not for the absurdity of the thing, I should think that he meant by the latter to take off the top of the hive, and cut out a portion of the store and brood combs! a thing I never did, and never knew any one else to do; neither can I imagine anything gained by it—letting alone the chances of stings during the operation. If it means this, I object to it in toto. One objection would be just what he gave, viz: "disheartens the bees," causing them "to quit work and go to destruction," by simply repeating the operation! Is there not some risk in the first operation, when the second is so dangerous? Where is the gain? Suppose we obtain 20 pounds from the hive—that space will hold 20 pounds again, and will be filled before anything is done in the boxes. Suppose again, that the main hive is let alone, and when the bees need any more store room, add the boxes. What is to prevent them from storing the 20 pounds in the boxes as collected? There would be these advantages at least: the boxes would be much more likely to be *pure—free* from bee-bread, and cocoons of the young bees, &c., it would be in much better

order from not being cut or broken, and the bees would be got rid of with one-tenth of the trouble, and the honey would be in very convenient packages for preserving or transporting to market.

As the public can be benefitted but little by our personal attacks, I shall not notice the *wit* relative to *shooting*, but proceed to portions of more general interest, which *may* result in some good.

Respecting the cost of hives, this will always be governed by the price of lumber and mechanics' wages. Any person can readily ascertain the difference in cost of each kind, by the amount of lumber required for hive and fixtures. The convenience after bees are in them, should be duly considered. Mr. Link "prefers dressing the inside of the hive, to letting the bees spend time to do it." Now I prefer not to do it—would refuse to have it done gratis—would scratch it rough if it had been done! Why?—Because the few bees at the top and sides of the cluster have to support the weight of the whole swarm, and if nothing but a smooth surface is presented to lay hold of, a large swarm will frequently drop to the floor, and as often creep back, except when they swarm out; they thereby lose as much time as when they go quietly about smoothing the hive for themselves, and have something to cling to. Also, every time they drop to the bottom increases their liability to go to the woods; perhaps ten per cent of the swarms will be thus lost in some seasons. Now I will not say, that having hives rough inside, will prevent going to the woods in all cases, but this I do say that during twenty-eight years experience with them, I have lost, on an average, less than one in five hundred.

Next he says, "Bees never cease their antagonism to worms until they spin their web and cocoons amongst the combs—then they abandon the entangling warfare." Has Mr. Link arranged this piece of natural history as adapted to his favorite hive, or has he failed to notice *facts*? It will not do in this day to tell us *this* as a matter of natural history. He either knows or ought to know, as well as every bee-keeper, that before a worm has moved its length in the combs, it begins its web for protection, that it is continued, if unmolested, until it has its growth, when it is ready to spin its cocoon. If but few bees are in the way it will be among the combs; if many bees, it seeks a safe retreat somewhere else; this may be between the hive and "bench," or outside "in the grass." To say that the bees of a thrifty stock, "abandon" all attempts to remove a web or cocoon in their combs, is to contradict not only the evidence of my own senses but the testimony of nearly every writer on the subject. If this were not so, there is not a stock in the country that would stand through a single summer. It is proved by *weak* stocks, and *those only* being destroyed by them. There are moth eggs enough in every stock to insure its destruction at any time in summer, after July, if it was not for the bees removing them as fast as they hatch, or soon after they commence depredations. This can be proved by our taking all the bees from a hive, and closing it to prevent the entrance of the moth afterwards, and leaving it in some warm place—the contents will be devoured in about three weeks.—With the observatory hive, the whole process can be witnessed. The worms generally work in the brood combs. Occasionally the web may be seen some inches in length on the surface of a comb filled with brood, in a day or two, (unless the family is weak,) the bees may be seen biting it out. At other times, before the brood is much advanced the worms may work near the centre of the combs; in that case the bees not only bite away the comb down to the web, but remove all the young immature bees in the cells along the line of the web, to get a chance to remove it. These demolished cells are then rebuilt. Very small swarms, that are just strong enough to save themselves from destruction, will show distinctly the effect in numerous holes and irregularities made in removing the worms, Who has had the care of bees in which he was interested and has not noticed and regretted the great number of immature bees found on the floor of the hive, particularly during cool mornings in the early part of the season. Not one in ten would be found thus, were it not for the worms. This is proved again, by setting a hive and combs away in the fall without the bees, and freezing every part thoroughly, thereby destroying every moth egg; then introduce the bees again in March or April, no worms being there, no immature bees will be found, till perhaps June, not at any rate till a moth, matured by some other stock, lays its eggs there, unless, indeed, the hive should be on a bench with others where a worm could creep to it.—That cocoons are removed, is proved by the bees frequently bringing them out, sometimes two or three in a cluster.

This subject is one in which every bee-keeper is interested, and it is important that all should understand it as *it is*, because a person believing that bees of a thrifty colony "abandon the entangling warfare," as soon as a "web or cocoon" is seen in the combs, would give up in despair—they should rather consider the citadel *safe*, as long as garrisoned with *strength*, although the attack is made by legions. It is probable that a few will have an interest in this matter—perhaps like to see which of us is right, and learn something valuable by the means.

One word more in relation to old black combs. He says, "When bees abandon them they are a useless encumbrance—a fit receptacle for the moth to remain unmolested, &c." I will agree to this fully, because combs, without bees to protect them are surely destroyed, and any person undertaking to save them without the *help of the bees*, will soon discover his folly. But what I *do* object to in this paragraph, is the *inference* that the bees "abandon" the combs for being old and black." Now unless he can add some proof of this, I shall take the privilege of *guessing* it might be from some other cause, inasmuch as I have known combs abandoned before they had been constructed one year, or even six months, and I have known bees to occupy the same comb from nine to twelve years.

M. Quimby, *Author of*
"Mysteries of Bee Keeping Explained."
St. Johnsville, N. Y., Dec. 1857.

The Home Circle.

WOMAN, BEAUTIFY YOUR HOME.

Many a woman lives in a bare, unadorned, beautiless home, which a little earnest effort and importunity on her part, would greatly improve. We do not refer to the inside, but to the outside arrangements. The time will soon come to transplant trees, flowers, shrubs, vines &c. Let the women of each household see to it that their favorite trees and flowering shrubs and vines are put where they would like to see them growing. Let the door way or porch or window have a beautiful flowering vine clambering over it; let the yard have some shade trees growing in it; let the walks and corners have lovely shrubs adorning them; let the garden have rows of currant, gooseberry, raspberry bushes, growing for beauty and comfort; let the fences and walks be well arranged and grass plats and flower beds and edges be got ready, and then how much pleasanter and happier will be our farmer homes. See to these things, good women of the country. Your husbands will forget them unless you properly remind them of what their homes need for beauty. Do not let the season pass without having something done worthy of the good farmer's home. If there is no other way, let the women go out themselves, and with men to do the hard work, superintend the work themselves and see that it is done, and well done, and done in season. Do not put off the work. Procrastination is dangerous. Come what will beautify your homes. *

SPRING.

Is it possible that spring is coming in the middle of winter? It would seem so, so warm is the weather and so delightful withal. But spring or no spring, it is beautiful; it is lovely. So should it be in the Home Circle. Spring should reign through all seasons in the heart of home. Though the heat of summer burns, or the blasts of Autumn chill, or the cold of winter freezes the outward world, the little heart world of every home should bask in the sunlight of genial spring. There should be but one season to the heart, one season to home. Make it so ye inmates of the sacred circle of home. Make it so fathers, mothers, brothers, sisters. *

[Written for the Valley Farmer.]

HINTS TO HOUSEWIVES.

BY HETTIE HAYFIELD.

HEALTH AND SICKNESS.

The above caption does not seem particularly suggestive of duties belonging to the *Farmer's* Home Circle. Every true woman in any condition of life must keep vigilant watch over the health of her family; nursing the sick is the vocation of every daughter of Eve. But the farmer's wife must have some knowledge of medical remedies also, for there will arise many emergencies in her life in which she must act promptly, and should act intelligently. There are many families scattered over our great valley in which this fund of knowledge is imperatively needed, because there can no medical aid be had; besides in all families there are many petty sufferings which a little skill can alleviate without the expense or trouble of referring to a doctor. While we urge the necessity of this kind of knowledge we recommend its use in the most cautious manner. It is noticeable that Physicians administer medicines sparingly in their own families, trusting much to the recuperative energies of nature. The practice of using patent medicines, or indeed any of the host of wise women's prescriptions, without any definite knowledge of the properties of the remedy, is also to be avoided; and it is well to guard against the adoption of any one-idea system. The very fact that any system claims to produce the most opposite results, by the same process is sufficient to condemn it in a well balanced mind. Except for this claim for Hydropathy, we think we should have fallen into the water cure ranks. Residing near a water cure establishment we were compelled to acknowledge some marvellous results, and besides, it seems so consistent with the wisdom and mercy of God to surround a world of sickness with a universal remedy.

As it is we have always retained the services of an intelligent alopathic physician, independent enough to adopt a useful remedy from any system. After some words on two other points the remedies we suggest are such as we have seen successfully used by him for near a score of years.

PRESERVATION OF HEALTH.

"An ounce of prevention is worth a pound of cure," is an old adage, emphatically true in this department of life, and we think the woman whose untiring care keeps up all sanitary provisions and enforces all healthful regulations in her family, ranks far higher in the scale of excellence, than any one who cures a score of diseases contracted for want of sufficient provision for comfort. To have every live thing, far more, every human thing, well housed, is surely an economical as well as humane arrangement, that the owner of every home should attend to. The housewife cannot probably provide this herself, but she can see that she does not prevent it, by exacting an undue share of her husbands capital for the gratification of her tastes or follies. If provided, she can know that

they are kept clean and made comfortable; providing the clothes belongs to her department of industry, and should always be sufficient for cleanliness and comfort in the severest weather. Sufficient time for sleep should be allowed and exemption from exposure insured as far as possible. Abundance of simple, nourishing food should be furnished at regular hours, varied from time to time and well cooked. We think no part of Agricultural life more objectionable than the careless but not economical method of feeding in our great valley.

Meat and bread, it matters not how high prices rule, often constitute the unvarying rations from year to year, while a single acre cultivated in vegetables and fruits, together with a few cows would furnish a far cheaper and more wholesome food. If every thing must be estimated by dollars and cents, the economy of this plan should recommend it to farmers, but health and happiness are higher objects which he is morally bound to consider, and we know both are promoted by a varied and generous diet.

PROVISION FOR SICKNESS.

On large plantations where the laborers' houses are too distant for the master or mistress to attend to the sick conveniently, there should be an infirmary to which the sick can be brought; the same person, if possible, should always be detailed to nurse. The sick should be provided with a good bed, the room be comfortable and well ventilated. The physician's prescription should be faithfully followed, and no interference allowed. Company should be excluded if necessary. Improper diet carefully withheld, and the hours of rest carefully secured. These regulations would often prevent the spread of contagion and save valuable lives, for the ignorant are usually indiscreet and wilful, whether patients or nurses.

Every farmer, not convenient to a drug store ought to keep a supply of pure medicines and scales for weighing them. Blisters, sticking plaster, materials for poultices, &c., and then use them with great caution. Be careful to keep medicines labelled and keep them out of the way of children. We have known dreadful consequences from carelessness in this matter.

NURSING THE SICK.

The nurse should be a tidy, exact, quiet, but cheerful person. The movements of a nurse should be noiseless. When the clothing or bedding of the patient is to be changed, it should be first well aired, and the operation gone thro' quickly. Some wrapper should be convenient always to throw around the patient's shoulders when setting up. When a bath is to be given or blister dressed, have everything in readiness before you begin. If you have no convenience for bathing a patient, spread an oil cloth on one side of the bed, lay the sick on it and sponge freely. Be watchful, patient and firm all the time.

REMEDIES.

Apoplexy.—Until the services of a physician can be procured, keep the patient in a nearly erect position; be careful not to let the head fall on the chest, back or forward; remove every thing from about the throat; rub the chest and spine briskly, with the hand dipped in cold water; apply mustard or pepper poultices. A sudden paralytic stroke is hardly distinguishable from apoplexy; it does not so often terminate fatally at once, but leaves the patient generally in worse condition. In the cases treated under our observation, bleeding seemed to operate unfavorably.

Bites or stings of venomous insects.—Bind on a poultice of common salt or soda.

Burns or Scalds.—If the injury is on a part that can be instantly immersed in cold water, it will never blister, but if the patient is chilly or afraid of cold water, put on promptly a thick coat of white, or sift common flour on thickly; bind up and let it remain until healed.

Boils, risings, or inflamed breasts.—Fold a linen cloth several double; dip it in cold water, lay it on the part inflamed. Cover it over with as many folds of dry cloth. If the pain is not very soon relieved, use ice instead of the wet compress, and we warrant instant relief and a cure if persevered in.

Cholera, Cholera Morbus, &c.—We have had woful familiarity with these diseases, especially Asiatic cholera. Our conviction is that three-fourths who die perish from disregard of premonitory symptoms. In many cases, to lie still, keep warm and take any astringent medicine, will ward off an attack. From 5 to 20 drops of laudanum, in a teaspoon of camphor, has answered our purposes generally. If the attack is severe, as soon as pain in the bowels is felt, a vomiting begins; give a powder of calomel, 2 drachms; red pepper, 2 drachms; gum camphor, 1 drachm. After spell of vomiting, or rice water discharge, give a half powder. When the pain, vomiting, &c., have been relieved, give and repeat the dose every 4, 6, or 8 hours, until it operates satisfactorily, a powder composed of aloes, 1 drachm, rhubarb, 1 drachm, gum camphor, 1 1-2 drachm. The patient should be kept comfortably warm, and if any symptoms of cramp appear, rubbed incessantly with flour of sulphur, whiskey, &c.

Drowning.—Carry the body gently with the head a little raised. Strip quickly, rub the body dry and place in warm blankets. Press the tongue downward and forward, insert a tube into the windpipe, and blow into the lungs and press on the abdomen alternately, thus producing an artificial respiration. Means of restoration should be preserved in many houses as recovery is always slow.

Fainting.—Lay the person in a recumbent posture, head elevated, where there is a free circulation of air, loosen the clothes, sprinkle cold water in the face, and apply strong odors to the nostrils.

Bite of mad dogs, venomous serpents, poisonous insects, &c.—We were assured in Mississippi that a mad dog or rattle snake bite could be rendered harmless, by making the person *drunk* immediately. We have seen the same remedy published in Southern papers.—The usual method prescribed is to tie a band tightly between the wound and heart; cup the wound, then cut or burn out thoroughly with red hot iron or lunar caustic.

Poisons.—These are too numerous to go into

detail. Emetics are usually given after such as cause drowsiness or delirium. Sweet water, milk, whites of eggs, or oil, after those that occasion pain in the stomach and vomiting.

Tooth Ache.—If from a deranged stomach, take an emetic. If the tooth is hollow put cotton saturated with creosote—if badly diseased have it extracted promptly.

Ear Ache.—Mix spirits of camphor, sweet oil and laudanum together, warm, and pour into the ear a half teaspoonful, fill the ear with wool or cotton, warm a little bag of bran, and lie down with your ear on it.

Sore Throat.—A wet compress, worn a few hours will often relieve it; if severe, a pepper or dog-fennel poultice, worn until smart irritation is produced, will soon relieve. From time to time swallow a pinch of the following powder. Mix well together 10 grains of ippecac 20 gr. salt-petre, 40 gr. of loaf sugar.

Croup.—Vomit the sufferer promptly, with antimonial wine, (a tea spoon every 10 or 15 minutes until it is effective,) or any emetic. When none is at hand, a poultice sprinkled strongly with snuff, will be a speedy remedy, but it produces dreadful nausea.

Our space has been filled by hints on accidents and diseases that must have treatment before a physician can be readily procured. We close with directions for some little articles often needed, and a few receipts for cookery for the sick, remarking that entire abstinence from food is generally more conducive to convalescence than the most tempting food.

BLISTERS.

Cut a piece of stout cloth the size you wish to blister. Spread it smoothly with Spanish flies, lay over it a piece of gauze, dip it in vinegar, warm it and lay it on until the skin looks shrivelled or rises. Crush some cabbage leaves or plaintains, with a rolling pin; scald them until soft; cool them. Take off the plaster, prick the blister with a large needle, wipe the water discharged and lay on the leaves. Repeat this dressing twice a day until you wish the blister healed. Dress then with a creamed cloth.

POULTICES.

Grate a tea cupfull of fine crumbs of light bread, pour on it boiling water, let it steep 10 minutes, spread it smoothly on a piece of thick, cotton cloth. If you need a mustard or pepper poultice, just sprinkle thickly the surface of a light bread poultice, with the powder of either article. If needed very strong, as active counter-irritants, they must be made by mixing them with about one-half of common flour.

Slippery-elm, onion, or any vegetable poultice is made by reducing the substance to a pulpy paste.

EMETICS.

A table spoon of mustard and tea spoon of salt, mixed in warm water is a safe emetic.—From 20 to 30 grains of ippecac mixed in warm water and drank at intervals is the usual one. Warm water alone will do.

DIET FOR THE SICK.

Gruel.—Two table spoons of corn meal, mixed to a smooth paste, in a little water; pour it into a quart of boiling water; boil down until it is as thick as cream and tastes done. Season with salt and pepper, or sugar and nutmeg.

Porridge, is made of wheat flour, as above, with a spoonful of sweet cream added.

Ponado.—Break a bowl half full of crackers or good light bread, pour it into boiling water, season with sugar and whole spice and a spoonful of wine, if stimulants are allowed.

Broth, of chicken, veal or game. Cut up the meat with a tea cup of rice, cover with water, and boil until the flesh is in rags; strain off the liquid and season agreeably with salt, pepper and savory herbs.

Post Up Your Wife.

Keep them posted, duly, promptly, cheerfully. Impart to them all the light you can. Do you, husbands, post them up on subjects of importance; interests and reform; collect facts, passing events, things interesting, profitable, edifying; things moral, intellectual and political? Sensible, intelligent, virtuous wives highly appreciate this, especially those pressed with domestic cares and duties, who have very little time for extended reading and investigations. Some husbands are very remiss in this benevolence; others, we are pleased to say, are happily communicative, take special pains and delight in posting their wives and children, in imparting life and information. At table, during meal-times and on every suitable occasion, they open their minds freely, cheerfully, give a condensed, succinct, bird's-eye view of all their book and paper readings and all the interesting and important facts, gathered variously daily, weekly, monthly.

Thus wives and all present are cheered, gratified, benefitted, enabled also to impart the information to others; this generous impartation of things profitable, interesting and edifying, produces a salutary effect on the minds and hearts of the husband, deepening and riveting virtuous principles and important facts. "He that watereth shall be watered also himself." Husbands, do you think of this? Will you think of it! This method also produces sociability and companionship between husbands and wives most pleasantly, hopefully and profitably, which would otherwise be lost.—*Golden Rule.*

THE LAST WORD.

Never contend for the last word in any dispute. It has often caused the most terrible results between real friends. The last word is the dangerous one. Avoid it. In every difference of opinion we should avoid the use of the last word. If it does not cause an immediate outbreak, it leaves a slow-healing wound.—Stop as soon as a dispute is commenced, lest you have the last word and do an evil you cannot mend.

The Young Folks' Page.

MANNERS.

Young folks should be mannerly. But how to be is the question. Many a good boy and girl feel that they cannot behave to suit themselves in the presence of company. They are awkward, clownish, rough. They feel timid, bashful and self-distrustful the moment they are addressed by a stranger, or appear in company. There is but one way to get over this feeling and acquire graceful and easy manners; that is to do the best they can all the time at home as well as abroad. Good manners are not learned so much as acquired as a habit.—They grow upon us by use. We must be courteous, agreeable, civil, kind, gentlemanly and womanly at home and then it will soon become a kind of second nature to be so everywhere. A coarse, rough manner at home begets a habit of roughness, which we cannot lay off if we try, when we go among strangers. The most agreeable people we have ever known in company are those that are perfectly agreeable at home. Home is the school for all the best things.

HOLD ON.

Hold on to your tongue when you are just ready to swear, lie, speak harshly, or say any improper word. Hold on to your hand when you are about to strike, pinch, scratch, steal, or do any disobedient or improper act. Hold on to your foot when you are on the point of kicking, running away from duty, or pursuing the path of error, shame or crime. Hold on to your temper when you are angry, excited or imposed upon, or others are angry about you. Hold on to your heart when evil associates seek your company and invite you to join them in their games, mirth and revelry. Hold on to your good name at all times, for it is more valuable to you than gold, high place, or fashionable attire.—Hold on to truth, for it will serve you well and do you good through life and through eternity. Hold on to your virtue, it is above price to you in all times and places. Hold on to your good character, for it is, and ever will be your best wealth.

PRECEPTS.

Industrious children make thrifty people.

"The boy is the father of the man," which means that boys will make such men as they set themselves out to be.

THE GIRLS.

Everybody likes the girls if they are only good, and few like them if they are not good. But what is a good girl? Is it one that is contented to sit all day about the house and do nothing; that will let the books and papers lay all day on the table and not read one of them; that seeks not to know anything valuable or do anything useful, whose only use is to consume victuals and wear out dry goods? Is such an one a good grrl? Certainly not. She only is good who does good. Girls have something to do as well as boys. They are something more than dolls, more than babies. They have much to learn and do to be good and useful. They have minds to educate every whit as good and strong as the boys; they have hearts to cultivate as brave and noble as they are tender and loving; they have hands to teach all useful labors, and consciences to train in the way of duty. They have characters to form, opinions to make up, positions to fill, avocations to pursue, duties to prepare for, everything that is great and good to do. Doing these things makes them good. Such girls are of inestimable value to themselves, their families and the world.

THE QUICK QUARTER.

A boy worked hard all day for a quarter of a dollar- With the quarter he bought apples and took them to town and sold them on the street for a dollar. With the dollar he bought a sheep. The sheep brought him a lamb and her fleece brought another dollar. With the other dollar he bought him another sheep.—The next spring he had two sheep, two lambs, and a yearling sheep. The three fleeces he sold for three dollars and bought three more sheep. He now had six with a fair prospect. He worked where he found opportunity for hay, corn and oats and pasturing for his sheep. He took the choicest care of them and soon had a flock. Their wool ennabled him to buy a pasture for them, and by the time he was twenty-one he had a fair start in life, and all from the quarter earned in one day.

THAT CALF.

My grandmother gave me a calf. I worked for my father for its keeping. When it was a year old I sold it to him for a pair of steer calves. When the steers were two years old I sold them to him for $28 and took my pay in sheep. I kept the sheep, giving their wool for their keeping, till my flock sold for $75. I loaned the money to my father and took his note at 6 per cent interest. When I was of age it amounted to one hundred dollars, and all from the calf my grandmother gave me.

Editor's Table.

REMOVAL.

The Office of the Valley Farmer in St. Louis, has been removed to the South-east corner of Chesnut and Second streets, immediately over the Post Office, third story.

LECTURES ON AGRICULTURE.

NORMAN J. COLMAN, Editor of the Valley Farmer, will Lecture on "Progressive Agriculture," in Illinois, at the following named places and times, viz:

At Bunker Hill, Macoupin Co.,		Friday,	Jan.	22d.
Gillespie,	" "	Saturday,	"	23d.
Litchfield, Montgomery	"	Monday,	"	25th.
Hillsboro,	" "	Tuesday	"	26th.
Pana, Christian	"	Wednesday,	"	27th.
Shelbyville, Shelby	"	Thursday	"	28th.
Mattoon, Coles	"	Friday	"	29th.
Charleston, Coles	"	Saturday	"	30th.
Ashmore,	" "	Monday,	Feb.	1st.
Oakland,	" "	Tuesday	"	2d.
Kansas, Edgar,	"	Wednesday	"	3d.
Grand View, Edgar	"	Thursday	"	4th.
Paris,	" "	Saturday	"	6th.
Nioga, Cumberland	"	Tuesday	"	9th.
Effingham, Effingham	"	Wednesday	"	10th.
Ewington,	" "	Thursday	"	11th.
Mason,		Friday	"	12th.
Salem, Marion	"	Saturday	"	13th.

The Lectures will commence at early candle-lighting, except those which are delivered on Thursdays and Saturdays, which will commence at 2 o'clock P. M. Ladies as well as gentlemen are respectfully invited to attend.

Encouraging.

We take great pleasure in informing our patrons that our expectations have been far more than realized in regard to the increase of our circulation for the new volume. It is true we expected much, but such a generous and hearty response from all parts of the west we did not anticipate. Such an accession of new subscribers from nearly every post office at which the Valley Farmer has been received, the times had not prepared us to expect. It has proved to us one fact and that is that everywhere the Valley Farmer circulates it has true and devoted friends, as much interested in its welfare as we are, who are equally zealous in laboring to advance its prosperity and usefulness. From Missouri and Illinois, from Kentucky and Indiana, from Iowa and Kansas, from Tennessee and Arkansas and Texas, subscribers have been pouring in since the commencement of our new volume, with a ceaseless tide. We have nothing but thanks and the best and utmost labors of our minds to offer our friends in return for their kindness. Rely upon it, all that we can do, to make the Valley Farmer a valuable, reliable and instructive agricultural journal shall be done.

To our Readers.

In consequence of severe illness, the Louisville editor of the Valley Farmer has not been able to furnish his usual amount and variety of matter for the different departments of this number, nor has he been able to reply to the enquiries of several correspondents on subjects of manures, seeding Blue Grass and other subjects in this number.

Premium Essays.

We have received a number of essays competing for the premiums offered by us for short practical articles in our December number. One of the articles appears in this number, on the Management of Cattle. There are several essays on some of the same subjects, while other subjects have not been touched. When the committee shall determine which of the articles are entitled to premiums, we shall publish them, from time to time, as the space in our columns will permit.

Awards of the Ill. State Ag. Society.

The Executive Committee of the State Agricultural Society met at Springfield on Wednesday last, and made the following awards:

FARMS.—Best and most highly improved farm of 500 acres, 1st premium, diploma; J. N. Brown, Sangamon county.

2d premium, medal; awarded to Silas H. Elliot, Edgar county.

Best farm not less than 160 acres, 1st premium, diploma; John S. Hosford, La Salle county.

2d premium, medal; awarded to Benjamin Burt, Champaign county.

Best and most highly cultivated and improved nursery which contains the best variety of fruit trees, shrubs and plants, 1st premium, diploma; Chas. Kennicott, Cook county.

2d premium, medal; awarded to M. L. Dunlap, Champaign county.

FIELD CROPS.—Best crop spring wheat on 40 acres, 1st premium, Manny's reaper; awarded to Hugh Hules, St. Charles, Kane county.

Best five acres fall wheat, 1st premium, diploma and $25; awarded to John Anderson, Randolph county.

Best crop of spring wheat of five acres, 1st premium, diploma and $25; awarded to Harrison Hancock, Tazewell county.

Best crop of corn of five acres, 1st premium, diploma and $25; awarded to Harrison Hancock.

Best crop of oats of five acres, 1st premium, diploma and $25; awarded to Harrison Hancock.

2d premium (oats) medal; awarded to Daniel Kelly, Wheaton, DuPage county.

Best crop of white beans, 1st premium, diploma and $20; Harrison Hancock.

2d premium, medal, awarded to Levi Mason, Bureau county.

Best half acre of potatoes, 1st premium, diploma and $20; awarded to Harrison Hancock.

Best acre of timothy seed, 1st premium, $10; Harrison Hancock.

Best acre of blue grass seed, 1st premium, $10; Harrison Hancock.

Best quarter of an acre of onions, 1st premium, $10; A. B. Rumsey, Marteno, Kankakee county.

ST. LOUIS AGRICULTURAL AND MECHANICAL ASSOCIATION.—The annual election of Directors came off on Saturday, January the 9th, and the following named gentlemen were elected: J. R. Barrett, T. T. January, H. T. Blow, H. C. Hart, John Withnell, A. Harper, Chas. L. Hunt, H. S. Turner, Chas. Todd, Thornton Grimsley, T. B. Hudson, John Sappington and Benjamin O'Fallon. On Monday the new Board met and elected the following named gentlemen officers: President, J. R. Barrett; Vice Presidents, H. C. Hart, A. Harper, and Col. Grimsley; Treasurer, H. S. Turner; General Agent and Recording Secretary, G. O. Kalb; Corresponding Secretary, Norman J. Colman.

PETERSON'S LADIES' NATIONAL MAGAZINE.—A most entertaining work for the ladies, is always at hand on the first of the month. Price only $2 00 per annum. Address Charles J. Peterson, Philadelphia.

PREPARE FOR SPRING.

The winter has thus far been peculiarly favorable to the prosecution of the farmer's work. And if it still remains open and pleasant, it behooves farmers to be active in putting everything in order for spring. All tools and implements of husbandry, wagons, carts, &c., should be put in the very best order and then well housed and made ready to run at a minutes warning. Farmer's tools should be minute-men, ready to fly to the post of duty at a cal' of need, cocked and primed and ready for action. Much time is wasted in busy seasons, by indolent, and careless farmers, by having nothing ready for use when it is needed. So should all the buildings of the farm be put in order, replaced if necessary, the loose boards well nailed on, stables, sheds, out-houses, barns, all should be renovated, looked after and set in perfect order in winter for the coming season. Fences and yards may be well put to rights in the last of the winter when the weather will permit; bars, gates, bridges, and farm roads too, may be repaired, if needed. Trees, shrubs, and vines for shade, for fruit, for decorations may be transplanted successfully any time in the winter when the weather is comfortable and the ground unfrozen. This is a part of the winter's work which should not be neglected when the season is favorable. How many farm houses have not a shade tree to shelter them from the winter's blast or the summer's sun, or relieve them from the sterility of taste which bare buildings present. How many have no fruit trees or vines or shrubbery about them to give any appearance of taste or comfort or refinement. How much would a few days work each winter add to the beauty and real comfort of the farm house. The wood house above all thiegs should not be neglected in the winter. Those who have no wood house should make one at once, and when it is made it should be well filled with well prepared wood and enough of it to last till next winter. Washington said "in time of peace prepare for war," so we say in winter prepare for summer, in rainy days prepare for fair ones, in idle seasons prepare for working ones. Ease and success in farming depend not a little upon this well ordering of time.

CROPS, &C., IN IOWA.—The crops in the southern part of Iowa were pretty good the past season Wheat and barley, an average; oats less; hay less than half a crop; corn crops large, but a great deal of it frosted, perhaps one-fourth of it soft corn; hogs, good ones, rather scarce. Beef plenty, at low prices. Stock of all kinds very low; times hard, &c. J. M. L.

OFFICERS OF THE MORGAN CO., (ILL.) AGRICULTURAL AND MECHANICAL ASSOCIATION.—Wm. Kinman, President; Jonathan Nooly, J. T. Holmes, Vice Presidents; A. Rockwell, Secretary; James Green, Treasurer; Geo. Graff, Richard Matthews, S. M. Rannels, Stephen Dunlap, Wm. Richardson, Stephen Green and H. H. Massey, Directors.

HARPER'S MONTHLY MAGAZINE, for February, has been laid on our table, by our next door neighbor, J. M. Crawford, St. Louis. This is one of the most readable Magazines published, and is worth double the price to every reader. Its articles are all original and from our ablest writers. Price 25 cts. per number.

NURSERY CATALOGUES, &C.—Numerous subscribers and others have addressed the Louisville editor of the Valley Farmer, requesting him to send them his catalogue of fruit trees, implements, seeds, &c. The Louisville editor is engaged in no business whatever, except writing for the Valley Farm r, nor has he had any interest in any nursery or seed establishment since his connection with the paper as editor, although his name was used in connection with an agricultural warehouse for a few months, by consent, previous to his engagement with the Valley Farmer. This notice is given to avoid writing numerons letters in answer to such enquiries.

THE AMERICAN FARMER'S ENCYCLOPEDIA, Embracing all the recent discoveries in Agricultural Chemistry, and the use of Mineral, Vegetable and Animal Manures, with descriptions and figures of American insects, injurious to vegetation. Being a complete guide for the cultivation of every variety of garden and field crops. Illustrated by numerous engravings of grasses, grains, animals, implements, insects, etc. By Gouverneur Emerson, of Pennsylvania, upon the basis of Johnson's Farmer's Encyclopedia.

We are indebted to A. O Moore, (late C. M. Saxton & Co.) the American Agricultural Book Publisher, for a copy of this valuable work. It is a complete Epitome of Agricultural information, and will be a valuable acquisition to our Agricultural Libraries. Farmers frequently stand in need of a book of reference, and we know of no work that we can recommend more highly for this purpose than the above. Price, $4 00.

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